

(7.2)

University of Kansas.

1895-'96.

Lawrence,
April, 1896.

Learning and Labor.

LIBRARY

OF THE

University of Illinois.

CLASS.

BOOK.

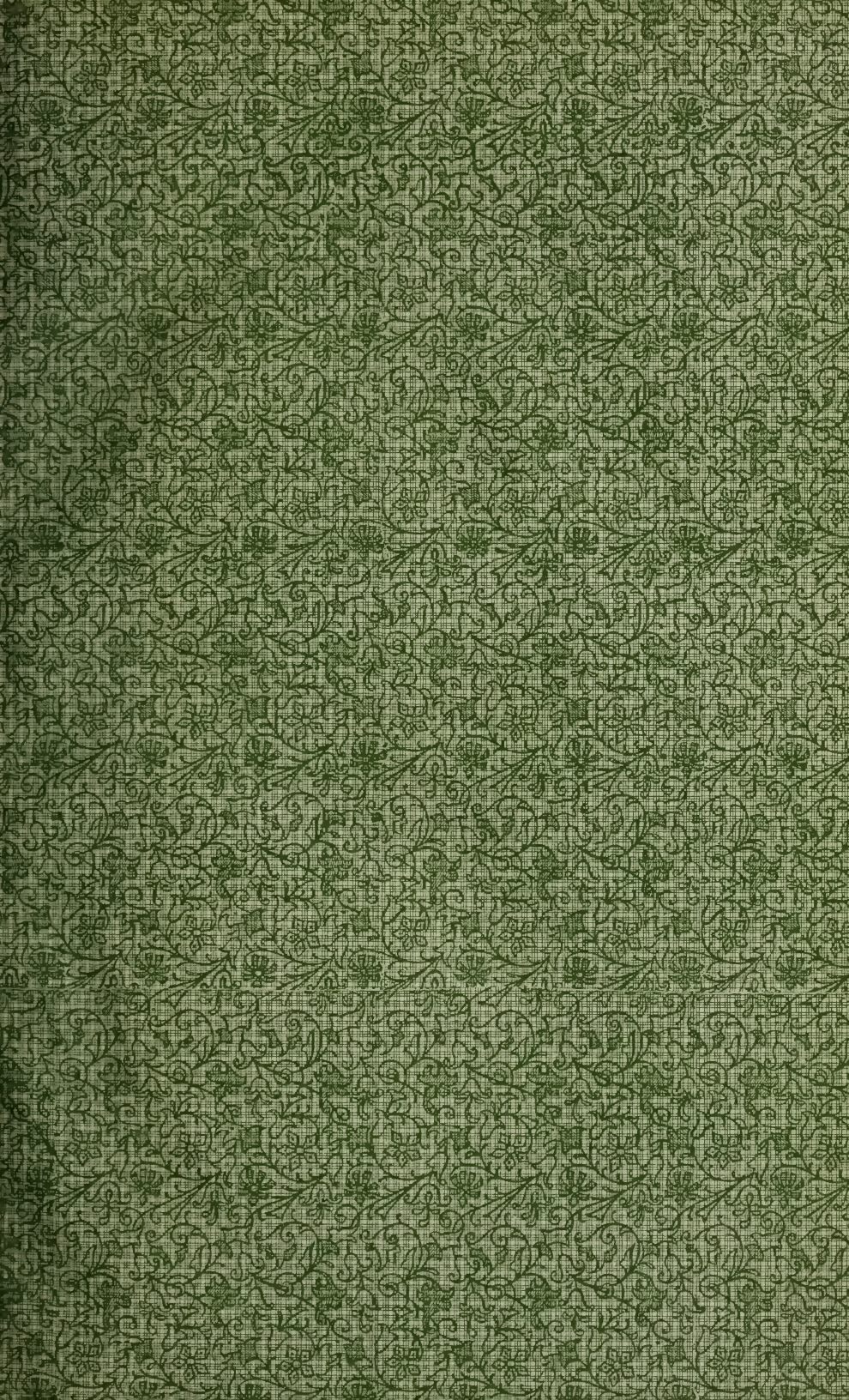
VOLUME.

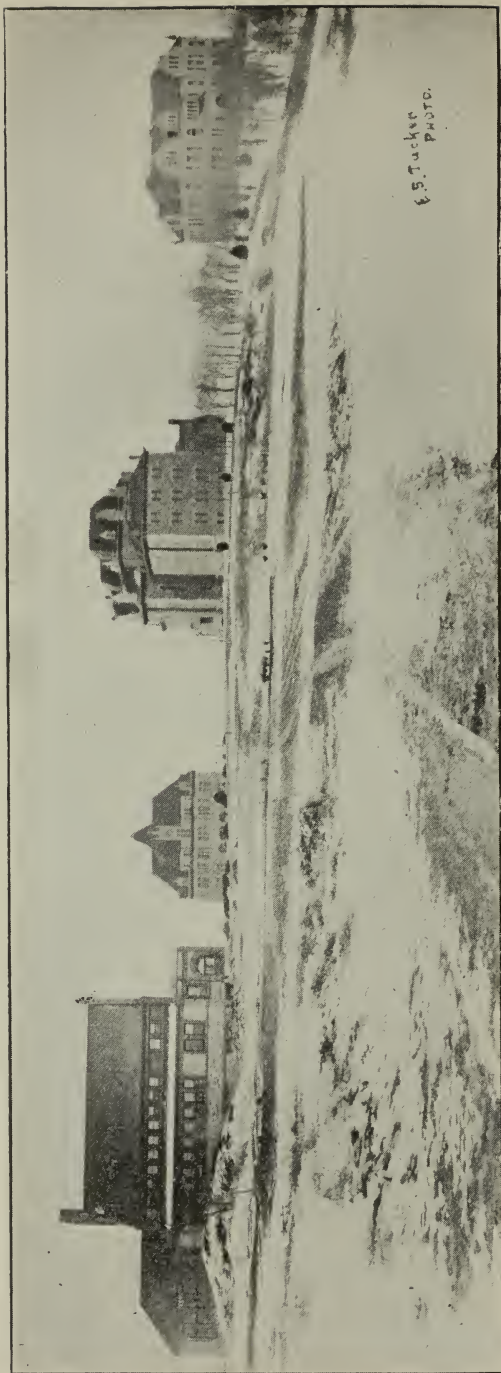
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1895-99

Accession No.





E. S. Tucker
PHOTO.

SPOONER LIBRARY,
Erected in 1894.

PHYSICS BUILDING,
Erected in 1895.

MAIN BUILDING,
Erected in 1872.

SNOW HALL OF NATURAL HISTORY,
Erected in 1886.

GENERAL VIEW OF THE UNIVERSITY BUILDINGS.

(Not including North College, Chemistry Building, Shops and Power House, and Chancellor's Residence.)

70
13
62
132

THIRTIETH ANNUAL CATALOGUE

OF THE

UNIVERSITY OF KANSAS

FOR THE YEAR 1895-'96.

TOPEKA:
PRESS OF THE KANSAS STATE PRINTING COMPANY.
J. K. HUDSON, State Printer.
1896.

Announcements.

For 1896.

- Jan. 6, Monday—Christmas recess ends.
Jan. 27 to 31, Monday to Friday, inclusive—Semiannual examinations.
Feb. 3, Monday—Second term begins.
April 1, Wednesday—First half term ends.
April 2 to 6, Thursday, Friday, and Monday—Spring recess.
April 7, Tuesday—Second half term begins.
June 1 to 5, Monday to Friday, inclusive—Annual examinations.
June 4, Thursday—Commencement concert by Music department, School of Fine Arts.
June 7, Sunday, 8 P. M.—Baccalaureate sermon.
June 9, Tuesday, 8 P. M.—Annual Alumni address.
June 10, Wednesday, 10 A. M.—Commencement exercises.
(*Summer vacation of 13 weeks.*)
-

For 1896-'97.

- Sept. 9, Wednesday—First term begins.
Sept. 9, 10, Wednesday and Thursday—Examination of candidates for admission, and presentation of certificates from high schools, academies, and other institutions.
Sept. 11, Friday—General assembly of students, and annual address in University Hall, at 10 A. M.
Nov. 12, Thursday—Second half term begins.
Nov. 26, 27, and 30, Thursday, Friday, and Monday—Thanksgiving recess.
Dec. 15, Tuesday, 8 P. M.—Christmas concert, by Music department, School of Fine Arts.
(*Christmas recess, Saturday, Dec. 19, to Monday, Jan. 4, inclusive.*)
Jan. 4, Monday—Christmas recess ends.
Jan. 25 to 29, Monday to Friday, inclusive—Semiannual examinations.
Feb. 1, Monday—Second term begins.
March 31, Wednesday—First half term ends.
April 1 to 5, Thursday, Friday, and Monday—Spring recess.
April 6, Tuesday—Second half term begins.
May 31 to June 4, Monday to Friday, inclusive—Annual examinations.
June 3, Thursday—Commencement concert, by Music department, School of Fine Arts.
June 6, Sunday, 8 P. M.—Baccalaureate sermon.
June 8, Tuesday, 8 P. M.—Annual Alumni address.
June 9, Wednesday, 10 A. M.—Commencement exercises.

Organization and Government.

By act of Congress, approved January 29, 1861, 72 sections of land were set apart and reserved for the use and support of a State University in Kansas. The state accepted the trust, and in an act approved March 1, 1864, provided as follows:

“SECTION 1. There shall be established in this state, at or near the city of Lawrence, in the county of Douglas, on the grounds secured for that purpose pursuant to the act entitled ‘An act to locate the State University,’ passed February 20, 1863, an institution of learning, under the name of THE UNIVERSITY OF KANSAS.

“SEC. 2. The object of the University shall be to provide the inhabitants of this state with the means of acquiring a thorough knowledge of the various branches of literature, science, and the arts.”

The legislature of the state made further provision for the University in an act approved February 25, 1889, and entitled “An act to provide for the government and maintenance of the University of Kansas.” This act, repealing all former legislation bearing upon the same topics, continues the name of THE UNIVERSITY OF KANSAS, and its location at LAWRENCE, in DOUGLAS COUNTY. It further enacts—

That the University shall provide the means of acquiring a general and thorough knowledge in literature, the sciences, and the arts; and also provide students who desire to pursue special studies with the most approved appliances, authorities and instruction to insure the greatest knowledge and research in any special branch of learning connected with university education; that it shall consist of three departments: (1) A department of the literatures; (2) A department of the sciences; (3) A department of the arts; and that within these three departments there shall be established such schools as the Regents, in connection with the Faculty, may order. The same law further enacts that the government of the University shall be vested in a board of seven Regents, six of whom shall be appointed by the governor and confirmed by the senate, and whose term of office shall be four years; that the Board of Regents shall be a body corporate, under the name of “The Regents of the University of Kansas,” and as such may sue and be sued, make contracts, and hold and transfer property, both real and personal, for the University.

The Board of Regents is also invested with the power to elect a Chancellor, who shall be the chief officer of the University; to appoint professors, assistants, tutors; to increase and diminish their number as the interest of the University may require; to employ a

janitor, librarian, and such other officers and employees as in their judgment the needs of the University require.

The Board is also empowered to confer such degrees and grant such diplomas as are usually conferred and granted by other institutions of learning.

Board of Regents.

F. H. SNOW, LL. D.,
PRESIDENT.

HON. C. S. GLEED*	Topeka	Term expires	1897
HON. J. P. SAMS.	Seneca	" "	1897
HON. C. F. SCOTT	Iola	" "	1899
HON. H. S. CLARKE	Lawrence.	" "	1897
HON. J. W. FORNEY	Belle Plaine	" "	1899
HON. F. G. CROWELL	Atchison	" "	1899

Officers of the Board.

F. H. SNOW	<i>President.</i>
J. P. SAMS.	<i>Vice-President.</i>
C. F. SCOTT	<i>Secretary.</i>

Officers of the University.

F. H. SNOW	<i>Chancellor.</i>
R. K. MOODY	<i>Secretary, Treasurer, and Purchasing Agent.</i>
E. F. ENGEL	<i>Registrar.</i>
C. H. GOODRICH	<i>General Agent for University Lands.</i>
T. C. WHITE	<i>Superintendent of Buildings and Grounds.</i>

Committees of the Board.

F. H. SNOW, *ex officio* Chairman of all Committees.

Instruction:

C. F. SCOTT.
J. W. FORNEY.
J. P. SAMS.

Library and Apparatus:

C. S. GLEED.
C. F. SCOTT.
H. S. CLARKE.

Finance:

J. P. SAMS.
J. W. FORNEY.
F. G. CROWELL.

Buildings, Grounds, and Supplies:

H. S. CLARKE.
C. S. GLEED.
F. G. CROWELL.

University Lands, and Endowments:

C. S. GLEED.
J. P. SAMS.
J. W. FORNEY.

Reports and Publications:

C. F. SCOTT.
J. W. FORNEY.
F. G. CROWELL.

Auditing of Accounts:

F. G. CROWELL.
J. P. SAMS.
H. S. CLARKE.

* To fill vacancy caused by the resignation of Hon. O. L. Moore, of Abilene.

Board of Instruction.

NOTE.—The names of the members of the Faculties are arranged in five classes—Professors, Associate Professors, Assistants, Lecturers, and Instructors; and the place of each in its own class is determined by seniority of appointment.

FRANCIS HUNTINGTON SNOW, PH. D. (*Williams*), LL. D. (*Princeton*),
PRESIDENT.

Professor of Botany and Entomology, and Director of the Museum
of Natural History.

EPHRAIM MILLER, PH. D. (*Allegheny*),
Dean of School of Arts; and Professor of Mathematics and Astronomy.

JAMES WOODS GREEN, A. M. (*Williams*),
Dean of School of Law; and Professor of Constitutional Law, Contracts, Commercial Paper, Partnership, Sales, Insurance, Agency, and Bailments.

WILLIAM HERBERT CARRUTH, A. M. (*Kansas University*), PH. D. (*Harvard*), Professor of German Language and Literature.

FRANK OLIN MARVIN, A. M. (*Allegheny*),
Dean of School of Engineering; and Professor of Civil Engineering.

EDGAR HENRY SUMMERFIELD BAILEY, PH. B. (*Yale*), PH. D. (*Illinois Wesleyan*), Professor of Chemistry and Metallurgy.

JAMES WILLIS GLEED, A. M. (*Kansas University*),
Professor of Law of Real Property.

ALEXANDER MARTIN WILCOX, PH. D. (*Yale*),
Professor of Greek Language and Literature.

LUCIUS ELMER SAYRE, PH. G. (*Philadelphia*),
Dean of School of Pharmacy; and Professor of Pharmacy.

ARTHUR GRAVES CANFIELD, A. M. (*Williams*),
Professor of French Language and Literature.

LUCIEN IRA BLAKE, PH. D. (*Berlin*),
Professor of Physics and Electrical Engineering.

LEWIS LINDSAY DYCHE, A. M., M. S. (*Kansas University*),
Professor of Zoology, Taxidermist, and Curator of Mammals and Birds.

FRANK WILSON BLACKMAR, PH. D. (*Johns Hopkins*),
Professor of History and Sociology.

CHARLES GRAHAM DUNLAP,* A. B. (*Ohio Wesleyan*), LITT. D. (*Princeton*)
Professor of English Literature.

GEORGE BARLOW PENNY, B. S. (*Cornell*),
Dean of School of Fine Arts; and Professor of Contrapuntal Harmony, Voice,
and Organ.

SAMUEL WENDELL WILLISTON, A. M. (*Kansas Agricultural College*),
M. D., PH. D. (*Yale*),
Professor of Historical Geology, Vertebrate Anatomy, and Physiology,

CARL ADOLPH PREYER (*Vienna*),
Professor of Piano.

OLIN TEMPLIN, A. M., M. S. (*Kansas University*),
Professor of Philosophy.

FRANK HEYWOOD HODDER, PH. M. (*Michigan University*).
Professor of American History and Administration.

EDWIN MORTIMER HOPKINS, PH. D. (*Princeton*),
Professor of Rhetoric and English Language.

JOSEPH AUGUSTUS FARRELL (*Leipsic*),
Professor of Violin, and Assistant in Voice.

ALFRED HOUGHTON CLARK (*Boston Museum of Fine Arts*),
Professor of Drawing and Painting.

ERASMUS HAWORTH, M. S. (*Kansas University*), PH. D. (*Johns Hopkins*),
Professor of Physical Geology and Mineralogy and Petrography.

HENRY BYRON NEWSON, PH. D. (*Ohio Wesleyan*),
Associate Professor of Mathematics.

WILLIAM CHASE STEVENS, M. S. (*Kansas University*).
Associate Professor of Botany.

EPHRAIM DOUGLASS ADAMS, PH. D. (*Michigan University*),
Associate Professor of History and Sociology.

ARVIN SOLOMON OLIN, A. B. (*Ottawa*), A. M. (*Kansas University*),
Associate Professor of Pedagogy.

*Absent on leave in Germany. His position is temporarily filled by Raphael Dorman O'Leary, A. B. (*Kansas University and Harvard*).

REV. HECTOR W. COWAN, A. M. (*Princeton*),
Associate Professor of Physical Culture, and Chapel Director.

EDWARD CURTIS FRANKLIN, M. S. (*Kansas University*), PH. D. (*Johns Hopkins*),
Associate Professor of Chemistry.

WILLIAM BALDWIN BROWNELL, A. B. (*Hamilton*), LL.B. (*Kansas University*),
Associate Professor of Criminal Law and Domestic Relations.

DAVID HULL HOLMES, PH. D. (*Johns Hopkins*),
Associate Professor of Latin Language and Literature.

MILES WILSON STERLING, A. M. (*Kansas University*),
Assistant in Greek.

EDWARD CHARLES MURPHY, M. S., C. E. (*Cornell*),
Assistant in Civil Engineering.

FRANK E. WARD,
Assistant in Electrical Engineering Shops.

HANNAH OLIVER, A. M. (*Kansas University*),
Assistant in Latin.

H. FOSTER JONES, A. B. (*Amherst*),
Assistant in English.

ELMER FRANKLIN ENGEL, A. B. (*Kansas University*),
Assistant in German, and Registrar.

EUGENIE GALLOO, B. L. (*Michigan University and University of France*),
A. M. (*Kansas University*),
Assistant in French and Spanish.

WILLIAM APPLETON SNOW, M. S. (*Kansas University*),
Assistant in Entomology.

ARTHUR ST. CHARLES DUNSTAN, C. E. (*Alabama Polytechnic Institute*),
Assistant in Physics and Electrical Engineering.

MARTIN EVERETT RICE, M. S. (*Kansas University*),
Assistant in Physics and Mathematics.

MARSHALL ALBERT BARBER, A. B. (*Kansas University*), A. M. (*Harvard*)
Assistant in Botany.

MAY MARCHANT PIERCE-CLARK (*Hemenway Gymnasium, Harvard University*),
Assistant in Elocution and Oratory, and Physical Culture.

ARNOLD EMCH, M.S. (*Kansas Agricultural College*), PH. D. (*Kansas University*),

Assistant in Graphics.

GEORGE WAGNER, PH. C. (*Michigan University*),

Assistant in Pharmacy.

ALFRED WASHBURN BENSON,

Lecturer on Pleading and Practice.

SAMUEL AGNEW RIGGS, A. M. (*Washington and Jefferson*),

Lecturer on Torts and Law of Railways.

D. M. VALENTINE, ex-Justice of the Supreme Court,

Lecturer on Wills and Successions, including Probate Practice.

C. L. DOBSON, Judge of the Circuit Court of Missouri,

Lecturer on Corporations.

JAMES HUMPHREY, Judge of Eighth Judicial District,

Lecturer on Evidence.

E. GENEVE LICHTENWALTER, Mus. B. (*Kansas University*),

Instructor in Piano.

WILLIAM MARION WHITTEN, B. S. (*Michigan University*),

Instructor in Chemistry.

CARRIE M. WATSON, A. B. (*Kansas University*),

Librarian.

Orations and Addresses.
1895.

BACCALAUREATE SERMON.

REV. WILLARD SCOTT, D. D.

ALUMNI ORATION.

WILLIAM H. CARRUTH, PH. D.

COMMENCEMENT ADDRESS.

WILLIAM R. HARPER, D. D., LL. D.

ADDRESS AT THE COMMENCEMENT OF THE SCHOOL OF LAW.

JOHN J. INGALLS.

ANNUAL ADDRESS AT THE OPENING OF THE UNIVERSITY YEAR.

JAMES WILLIS GLEED, A. M.

The University.

The University of Kansas is as much an integral part of the public-school system of the state as is the high school or any of the grammar grades. The University is at the head of this system, and at this institution every attendant upon the lower grades is privileged some day to complete his education. Adhering strictly to the public-school-system idea, the courses of study of the majority of the high schools of the state are arranged in accordance with a plan of preparatory studies prescribed by the University. Students who complete this course of preparatory study are admitted to the University without examination. Men and women stand upon an equal footing, and students of either sex are admitted to all the privileges of the University without charge for tuition. The University now comprises the School of Arts, the School of Law, the School of Fine Arts, the School of Pharmacy, and the School of Engineering.

Material Equipment of the University.

BUILDINGS.

North College.—This structure was the first building to be erected. It was completed in 1866, from which time until 1872 the entire work of the University was carried on within its walls. In 1872 the main building was completed, and North College was for a time closed. In 1890 it was again opened, and until the end of the school year, 1893-'94, was used by the School of Law. North College is 50 feet square, three stories high, and contains 18 rooms.

Main Building.—The main building was erected in 1872, to better accommodate the growing school and to relieve the crowded rooms of North College. It is 246 feet in extreme length, 98 feet wide in center, wings 62 feet each. There are 54 rooms in this building, of which one, the main audience room, is 94 feet long and 56 feet wide. This room has a seating capacity of 1,200. There are also in the main building 18 lecture rooms, each large enough to accommodate classes of 75 to 80 students. In this building are located the offices of the University, including the Chancellor's office, the office of the Secretary and Treasurer, and the office of the Registrar. The north half of the first floor is devoted to the use of the School of Law, including the law library. In the basement laboratories have been fitted up to relieve the overcrowded condition of the chemistry building.

The Chemistry Building Is a structure in the form of a T, the main part extending east and west, being 80 by 35 feet, and the L north of this 40 feet square. The east wing of the main structure is occupied as a lecture room capable of seating 75 students. The School of Pharmacy occupies the lower half of the building.

Snow Hall of Natural History.—Snow Hall is 110 feet in length by 100 feet wide, is provided with ample basement almost entirely above ground, two stories, each 16 feet in the clear, and an attic of 12 feet. The west half of the building is occupied by the museums of the geological and zoological departments. On the first floor of the east half is the lecture room, extending through the basement and first story, and arranged in amphitheater style. This room has accommodations for 200 students. On the second floor are the laboratories and collections of the departments of entomology and botany. The third floor is occupied by the department of zoology, and here also are the workrooms of the taxidermist. The first floor is given up to the department of geology and vertebrate anatomy. This building is furnished throughout with the best appliances for investigation and instruction in all branches of natural history, including 50 compound microscopes of the best manufacture.

Electrical-Engineering Shops and Engine House.—This building, 86x48 feet, contains a battery of six boilers, for steam heating and power, and also on the first floor two steam engines, of 150 and 35 horse power, respectively, for the machine shop, and several dynamo plants, used for instruction in electrical engineering. The second and third stories contain the machine shop for the students of the electrical-engineering course. The building has testing and power wires running to the physical laboratory, where the more delicate instruments are in use. The dynamo plants have capacity for lighting all the University buildings as well as the grounds.

Spooner Library.—This building was erected in 1894. It was built by means of the bequest of Wm. B. Spooner, of Boston. Its total cost was \$75,000. Its length is 112 feet and extreme width 50 feet. The building consists of two stories and a basement, the greater part of which is above ground. On the first or main floor are located the general reading room, a newspaper room, and the librarian's and cataloguer's offices. The reading room is admirably arranged and lighted. In the newspaper room are kept the county and city weeklies and dailies published within the state. In addition, dailies published in all the larger cities of the United States are kept on file. The second floor of the building contains a hall suitable for smaller audiences than are accommodated in University Hall. In the basement are seminary rooms used for private study of students in the various departments. The fire-

proof book stack, with a capacity of 100,000 volumes, is an integral part of the building, and yet it is so cut off as to render its contents absolutely secure. The book stack consists of five stories, each eight feet high. The entire inside work, including floors, supports, and shelves, is of iron. The entrance to the stack is on the reading-room floor. Several lifts and elevators render access to the different floors very easy. The entire building is lighted throughout by electricity. Its every appointment is modern and its facilities and usefulness unexcelled.

Physics and Electrical-Engineering Building.—This is of Chateau Renaissance style, three stories high, of Cleveland, Ohio, sandstone, and was completed September, 1895, at a cost of \$58,000. Besides a general lecture room seating 150 and two class rooms seating 50 each, and a departmental reading room and library, there are two general laboratory rooms covering 3,200 square feet, fitted for Sophomore and Junior work. Accessible to these, are supply, battery, workshop, balance and chemical rooms providing every laboratory facility needed. There are also eight private rooms for advanced physical research, each provided with water, gas, and electricity, and each basement laboratory room has a stone pier to bed rock and is free from vibrations of the building. Heavy electrical currents are so numerous and so planned that, to almost any laboratory room, all electrical currents from the dynamo station may be delivered. A 60-cell storage battery is continually charged for laboratory work. The building is constructed without iron below the third story to avoid magnetic disturbances. The general apparatus room contains now about \$23,000 worth of demonstration and laboratory instruments. The building is lighted throughout by electricity, and heated by the Sturtevant forced-draft system, regulated by electric thermostats in each room. The air is changed automatically every 15 minutes and in the lecture room every 10 minutes. The total amount of floor space for research purposes is 5,690 square feet.

Music Hall.—A large rented building, conveniently located on Massachusetts street, is at present occupied by the School of Fine Arts. It contains a large concert room and a number of smaller rooms used as lecture and practice rooms and studios.

Apparatus of Instruction.—The students in civil engineering are well provided with instruments for engineering operations in the field and the draughting room. This equipment consists of chains, tapes, compasses, engineers' transits of different forms, engineers' levels and leveling rod; aneroids; a transit, level of precision, and plane table, for geodetic surveying; rods, floats, and current meter, for measurement of the flow of streams; machine for testing the strength of cements; a 100,000-pound Olsen testing machine;

models illustrative of problems in descriptive geometry; blue-printing apparatus; blue prints of bridge details and standard railway plans; photographs of bridges and pumping machinery.

In physics and electrical engineering, the equipment is added to by annual appropriations. About \$23,000 has been thus far expended. Recently large additions for original and precise experimentation have been imported, and it is believed a strong undergraduate course in laboratory work can now be carried out and much advanced research presented. The most accurate instruments of well known best makers, both of this country and abroad, are provided, and the facilities of the engineering shops have allowed much new and original apparatus to be designed and constructed. It is the aim to keep the demonstration and laboratory apparatus to the standard of the newest and best makes and to the needs of modern laboratory methods. The apparatus in detail is similar to that found in well-equipped laboratories of the eastern universities, and therefore need not be enumerated.

The department of chemistry is well supplied with apparatus and material for carrying on university instruction. Laboratories are equipped in the chemistry building for work in general chemistry and qualitative analysis, quantitative analysis, and assaying, while in the basement of the main building temporary accommodations have been supplied for classes in organic chemistry, quantitative analysis, and gas analysis.

In astronomy, the apparatus is not extensive, but in lieu of an observatory it answers its purpose. There belong to this department, (1) a telescope with an object glass of six inches, manufactured by A. Clark & Sons, and costing \$1,000; (2) a good sextant; (3) a new celestial globe of 20 inches diameter; (4) a large number of astronomical slides, representing the sun and sun spots, the moon, the planets, comets, nebula, the constellations, variable and multiple stars, etc.

A good collection of plaster casts, models, photographs, plates, etc., has been made, as an aid to the study of the ancient and modern languages. Among these are plaster casts of many of the masterpieces of Greek sculpture. A model of the Acropolis, a reduced model of the east pediment of the Zeus temple at Olympia, casts of the Theseus of the Parthenon, Venus of Melos, and the Augustus in military dress, may be specifically named.

In addition, this work and that in history, politics and sociology are furnished with maps, charts, photographs, etc., very helpful to the student. To this apparatus of instruction additions are being constantly made.

Museums of Natural History.

- F. H. Snow, Director.
L. L. Dyche, Curator of the Zoological Collections.
S. W. Williston, Curator of the Paleontological Collections.
E. Haworth, Curator of the Mineralogical Collections.
W. C. Stevens, Curator of the Herbarium.
W. A. Snow, Curator of the Entomological Collections.
M. A. Barber, Assistant in Cryptogrammic Botany.
Hugo Kahl, Assistant in Entomology.
T. R. Overton, Assistant in Paleontology.

The work in botany, entomology, zoology and geology is greatly aided by the illustrative opportunities afforded by the cabinet collections, which contain upwards of 200,000 specimens. These collections have been chiefly obtained during the past 20 years by the voluntary contributions of exploring parties in western Kansas, Colorado, New Mexico, and British America, in charge of Professors Snow, Dyche, Williston, West, and Haworth. By means of the material thus accumulated, a system of exchange has been established with leading institutions and naturalists in all parts of the United States, so that the cabinets contain a very satisfactory representation of the plants, insects, mammals, birds, minerals, and fossils, not only of the state of Kansas, but also the whole of North America.

The herbarium includes upwards of 5,000 species of plants, permanently protected from destruction by vermin, and systematically arranged for convenient examination by students and visitors. The method of arrangement is substantially the same as that adopted at Harvard University.

The entomological collection contains more than 15,000 species and 100,000 specimens, representing all the different orders of insects. The instruction in this department has special reference to the discrimination of the beneficial from the injurious species, and the extensive collections are of practical value to the agricultural and horticultural interests of the state as well as to the students of the University in the determination of the names and habits of our insect friends and foes.

The collection of North American mammals has increased in size very rapidly during the past few years. The mounted mammals are arranged in the museums in natural groups and exhibit the perfection of the taxidermist's art.

The ornithological cabinets comprise upwards of 1,500 specimens of birds, belonging to 500 different species. These specimens are carefully protected in moth-proof cases. A portion of them are unmounted skins, furnishing ample material for laboratory study when fresh specimens cannot be readily obtained.

A fine series of skeletons affords representative types for the study of osteology.

An alcoholic collection of marine radiates, mollusks and articulates from the Atlantic coast affords to the zoological student the means of investigating the anatomical structure of the leading forms in all the great "types" of the animal kingdom.

In the conchological cabinet are included nearly 1,000 species of shells from all parts of the world.

The mineralogical and geological cabinets contain upwards of 100,000 specimens, chiefly from Kansas and the Rocky mountains.

The geological collection comprises an excellent series of typical paleozoic invertebrate fossils, especially those of the carboniferous of Kansas. The collection of mesozoic vertebrates is one of the most noteworthy in the world. Recent valuable additions have been made to the collection of vertebrates from the miocene and pliocene tertiary, and more extensive additions will be made the present year by exchange and from collections in Kansas, Wyoming, and Dakota.

The collection of cretaceous plants, obtained chiefly by the personal labor of the late Mr. E. P. West, is conceded to be the largest and best of its kind in the world.

The Library.

Carrie M. Watson, Librarian.

Helen Binninger Sutliff, Assistant.

Mabel Clare Rogers, Assistant.

Clara Scioto Gillham, Assistant.

Edith M. Clarke, Assistant.

Gomer Thomas, Student Assistant.

John Howard Engle, Student Assistant.

Warren Gus Miller, Attendant in Law Library.

Warner Sinclair Pope, Attendant in Law Library.

The University library, with the exception of the law library, is in Spooner library building, a building set apart solely for library purposes. The law library is in the main building, adjoining the lecture rooms used by the law department. The University library is open from 8 a. m. to 6 p. m. every day of the year, excepting Sundays and legal holidays.

The most liberal facilities for using the library are offered to all members of the University. All books, except reference books and books too rare to be easily replaced, may be taken from the library by the student for three weeks. After the three weeks expire a fine of 5 cents a day is imposed until the book is returned. The book may be renewed for three weeks longer, unless there is a demand for it by another student for required work.

This liberal policy has proved to be wise, as the students have largely taken advantage of the privileges. They are brought into actual contact with the books, and so learn how to investigate the authorities, and to make research for themselves. The library is

supplied with a partial card catalogue, which greatly facilitates the use of the books. The card catalogue is being pushed to completion as fast as practicable. A special feature of the library is the reading room, which has all the facilities for carrying on the study of books. It is a large, cheerful, comfortable and well-equipped room. The windows are placed high, so that the light comes from above, making a pleasant light for reading. It is heated by steam and lighted by electricity. There are 200 electric lamps in this room, so there is a perfect, evenly-diffused light. Here may be found the general reference books, cyclopedias, dictionaries, and card catalogue. The more important journals and periodicals (200 in number) are also to be found in the reading room, so that the student has the opportunity of keeping pace with current thought.

The library at present numbers 24,147 volumes, which are kept in the fireproof stack room.

The students do not have free access to the shelves; but when neither the catalogue nor the librarians can furnish the information needed, Juniors and Seniors may consult the books on the shelves.

Several departments have seminary rooms in this building. Books upon the subjects under discussion in the class rooms are placed in these seminary rooms, where it is convenient for the students to use them.

An annual appropriation of \$5,000 is devoted to the purchase of books. The books are selected with the greatest care, and the endeavor is made to furnish the students with the latest and best authorities in the various departments. While the library is not large, it is at all events sufficiently full to enable the student to prosecute research, and to furnish him substantial aid in his investigation.

The School of Arts.

Faculty.

F. H. SNOW, President,
Botany and Entomology.

E. MILLER, Dean,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

F. O. MARVIN,
Civil Engineering.

E. H. S. BAILEY,
Chemistry and Metallurgy.

A. M. WILCOX,
Greek.

L. E. SAYRE,
Pharmacy.

A. G. CANFIELD, Secretary,
French.

L. I. BLAKE,
Physics.

L. L. DYCHE,
Zoology.

F. W. BLACKMAR,
History and Sociology.

C. G. DUNLAP,
English.

G. B. PENNY,

Voice Training, Contrapuntal Harmony, Musical Composition.

S. W. WILLISTON,

Historical Geology and Paleontology.

OLIN TEMPLIN,

Philosophy.

F. H. HODDER,

American History and Civics.

E. M. HOPKINS,

English.

A. H. CLARK,

Drawing.

E. HAWORTH,

Physical Geology and Mineralogy.

H. B. NEWSON,

Mathematics.

W. C. STEVENS,

Botany.

E. D. ADAMS,

History and Sociology.

A. S. OLIN,

Pedagogy.

Rev. H. W. COWAN,

Physical Culture.

E. C. FRANKLIN,

Chemistry.

D. H. HOLMES,

Latin.

M. W. STERLING,

Assistant in Greek.

HANNAH OLIVER,

Assistant in Latin.

GEORGE WAGNER,
Assistant in Pharmacy.

H. FOSTER JONES,
Assistant in English.

E. F. ENGEL,
Assistant in German.

EUGENIE GALLOO,
Assistant in French and Spanish.

W. A. SNOW,
Assistant in Entomology.

A. ST. C. DUNSTAN,
Assistant in Physics.

M. E. RICE,
Assistant in Physics and Mathematics.

M. A. BARBER,
Assistant in Botany.

MAY M. PIERCE-CLARK,
Assistant in Elocution and Physical Culture.

W. M. WHITTEN,
Instructor in Chemistry.

Courses of Instruction.

Admission.

Every person who applies for admission to the Freshman class in the School of Arts is required to be examined in the various subjects mentioned below, or to present a certificate from high school, academy, or college, as explained under "Admission by Certificate." An applicant may be admitted, although deficient in some of these requirements, provided such deficiency does not exceed three* terms' work, but all deficiencies must be made good within a period determined upon at the time of admission.

Requirements for Admission.

1. *Physical Geography.*
2. *General History.* Myers, Sheldon, Barnes, or Fisher.
3. *Civil Government.* Thorpe and Hodder's Civil Government of the United States and of Kansas.
4. *Algebra*, through simple and quadratic equations.
5. *Geometry.* Plane and solid.
6. *Physics.* Appleton's School Physics; Gage's Elements of Physics, Carhart and Chute's Elements of Physics, or equivalent.
7. *Language.* In language, the candidate may offer any one of the following groups:

- | | | |
|-----|---|--|
| I. | { | English, three years. |
| | { | Latin, three years. |
| II. | { | English, one year. |
| | { | Latin, three years, |
| | | and of either French, German, or Greek, two years. |

The "years" above referred to are explained below in detail:

ENGLISH.

One Year. The applicant must have devoted the equivalent of two periods or recitations weekly to the study of classics, and three periods weekly to the study of English composition, and have a satisfactory knowledge of descriptive grammar and of grammatical analysis. He will be required to submit a list of the classics read in preparation for entrance, specifying which were read in class and which as collateral reading, and to write an essay of not less than 200 words upon a subject designated by the examiner and connected with some book on the list sub-

*A "term's work" signifies one study pursued daily for a period of half a year.

mitted. This essay will constitute the final test as to his work in composition. In literature, the essay will be supplemented by questions as to the subject-matter of the works he has critically studied in class, and their relation to the author and his time. In grammar, a knowledge of the leading facts will be required, and the applicant will be required to analyze sentences not presenting idiomatic difficulties, and to criticise ordinary examples of ungrammatical expression.

Full explanations of the nature of the work required in English, and suggested courses of study in literature will be found in the "Circular touching the Requirements in English" published by the University. In 1896, the examination may be based upon either of the following lists of classics, or an equivalent number and amount:

(a) Dickens's *Tale of Two Cities*; Shakspeare's *Merchant of Venice*; George Eliot's *Mill on the Floss*; Scott's *Talisman*. To be supplemented by an equal amount of collateral reading.

(b) In class: Shakspeare's *Merchant of Venice*; Milton's *L'Allegro*, *Il Penseroso*, *Comus*, and *Lycidas*; Webster's *First Bunker Hill Oration*. Collateral reading: Shakspeare's *Midsummer Night's Dream*; Defoe's *History of the Plague in London*; Irving's *Tales of a Traveler*; Scott's *Woodstock*; Macaulay's *Essay on Milton*; Longfellow's *Evangeline*; George Eliot's *Silas Marner*.

For the examination in 1897 the course recommended is as follows: For class study: Shakspeare, *Merchant of Venice*; Burke, *Speech on Conciliation with America*; Scott, *Marmion*; Macaulay, *Life of Samuel Johnson*. For collateral home reading: Shakspeare, *As You Like It*; Defoe, *History of the Plague in London*; Irving, *Tales of a Traveler*; Hawthorne, *Twice-Told Tales*; Longfellow, *Evangeline*; George Eliot, *Silas Marner*. For this list may be substituted the following, with an equal amount of collateral reading: Shakspeare, *Twelfth Night*; Longfellow, *Courtship of Miles Standish*; Irving, *Sketch Book*; Scott, *Ivanhoe*; Dickens, *David Copperfield*.

Certificates from accredited high schools, in order to be accepted for one year of English, must show that, in literature, the applicant has read the works specified in some one of the recommended courses or their equivalent, and that he has devoted to the work the required amount of time in class and at home. In composition and grammar, the certificate must show that the applicant has devoted the required time to the subject; that the time has been spent largely in actual writing and rewriting after criticism, and that he has mastered the leading facts of grammar, and can write with grammatical correctness.

Three Years. In addition to the preceding requirements for one year, the applicant must have devoted the equivalent of four periods or recitations weekly for one year to the study of litera-

ture, chiefly classics; three periods weekly for one year to composition; one period weekly for one year to rhetoric; one period weekly for one year to English language history and related subjects; and one period weekly for one year to the historical and scientific review of grammar. The applicant will be examined in the elements of rhetorical theory, particularly those relating to the choice and use of words and the structure of the sentence, and in the general principles of the paragraph and the whole composition, including the making of a plan. He will be required to write a short essay upon a literary topic, and another, narrative or descriptive, upon some subject based upon his own experience.

In literature, the candidate will be required to submit a list of 20 classics read in preparation for entrance, and his literary topic will be designated by the examiner from some one of these. The examination in literature will relate to details of style, subject-matter, purpose and historical relations of some of the classics read, and to the general outline of English literary history to the eighteenth century.

In language, the examination will include the history of the English language, and in connection with it the important facts of grammatical history, especially such as have to do with the decay of inflections, with idioms, and with etymology.

The following text-books, or their equivalent, may be used as a basis for preparatory work: In rhetoric, Genung's *Outlines of Rhetoric*; in literature, 20 classics and the first 218 pages of Pancoast's *Introduction to English Literature*; in language history, Lounsbury's *History of the English Language*, part I; and in grammatical review and grammatical history, West's *English Grammar*, and Lounsbury's *History of the English Language*, part II.

For a full list of teachers' helps, and information as to their nature and use, see the "Circular touching the Requirements in English," already mentioned.

Certificates from accredited high schools, if accepted for three years of English, must show that the required amount of time has been devoted to these subjects by the applicant, and that he has completed with satisfactory standing the work as outlined. In all cases of doubt, the right to examine is reserved.

FRENCH.

First Year. The translation at sight of easy French prose, and the writing of simple French sentences; a thorough knowledge of the conjugation of verbs, regular and irregular; and familiarity with the elementary principles of syntax (as much as is contained, for example, in the first part of Whitney's or Otto's *Grammar*).

Second Year. Thorough acquaintance with French grammar

—ability to read readily at sight; knowledge of some period of French literature, based upon the reading of its representative works.

GERMAN.

First Year. Grammar (Otis). Thorough drill in the declension of nouns and adjectives, and in the conjugation of verbs, both regular and irregular; translation of simple English sentences into German. Reader (Brandt), 100 pages, with careful attention to points of grammar and syntax. Dictation of simple German prose.

Second Year. Reader (Brandt completed), Wilhelm Tell (Deering's text. Sight-reading (*Der Zerbrochene Krug*). Exercises in composition and dictation.

GREEK.

First Year. White's Beginners' Greek Book, or Frost's Greek Primer, or an equivalent.

Second Year. Xenophon's Anabasis, two books, or their equivalent. In place of the above two years' work, the candidate may offer: The translation at sight of simple Attic prose, with questions on the usual forms and ordinary construction.

LATIN.

First Year. Grammar and reader.

Second Year. Caesar's Gallic War, four books, and two of Cicero's Orations.

Third Year. Four of Cicero's Orations, Virgil's Aeneid, five books, with questions on the subject-matter, grammar, and prosody, and the translation into Latin of simple sentences founded upon Caesar and Cicero.

Admission by Certificate.

I. Students will be admitted into the Freshman class upon the certificate of the president, superintendent or principal of any college, academy, or other incorporated institution of learning, or of any public high school of the state, showing that such students have completed all the preparatory prescribed studies as laid down in the University catalogue.

II. Students who present certificates in accordance with the above regulations, showing that they have completed all the required preparatory studies except three terms' work,* will be admitted with conditions, without examination. All entrance deficiencies must be made good within one year from the time of admission.

Candidates for admission who do not present certificates in accordance with the above regulations will be received into the University only on examination.

*Two terms after 1897-'98.

STATE HIGH SCHOOLS.

I. Names of high schools reporting courses which fully prepare for the Freshman class, School of Arts, are as follows:

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Abilene.....	J. C. Gray, A. M.....	Harold Barnes, A. B.
Alton, Ill.....	R. A. Haight.....	G. E. Wilkinson, M. S.
Arkansas City.....	T. W. Conway.....	L. E. Eddy.
Atchison.....	J. H. Glotfelter.....	C. A. Shively.
Atchison county, Effingham..	.....	S. J. Hunter, A. M.
Augusta.....	John H. Findly, A. B.....	Arthur L. Corbin, A. B.
Beloit.....	G. M. Culver.....	G. M. Culver.
Blue Rapids.....	.....	W. C. Coleman.
Burlington.....	R. A. Hampshire, M. S.....	Kate B. Miles.
Caldwell.....	J. F. Clark, B. S.....	Mary H. Vasey.
Carbondale.....	J. T. Albin, A. M.....	J. T. Albin, A. M.
Cawker City.....	L. J. Hall.....	L. J. Hall.
Clay Centre.....	B. F. Merten.....	Wm. S. Heusner, A. B.
Coffeyville.....	E. S. Jones, B. S.....	S. A. Harbourt, B. S.
Concordia.....	A. B. Carney.....	Ida Wilcox.
Cottonwood Falls.....	L. A. Lowther, A. B.....	L. A. Lowther, A. B.
Council Grove.....	B. F. Nihart, A. M.....	H. N. Whitford, B. S.
Dickinson county, Chapman,	.....	S. M. Cook, A. B.
Dodge City.....	Warren Baker.....	Warren Baker.
Downs.....	W. H. Andrews.....	W. H. Andrews.
Emporia.....	John Dietrich.....	Jas. D. Barnett, A. M.
Fort Scott.....	David M. Bowen.....	Laura M. Moore, A. B.
Frankfort.....	.....	T. P. Bogar.
Fredonia.....	J. R. Campbell.....	F. N. Howell, A. B.
Garden City.....	Treadwell C. Coffman.....	Roy S. Liggett.
Girard.....	J. W. Weltner.....	J. W. Weltner.
Great Bend.....	N. F. Daum, A. B.....	Jas. A. Brady.
Halstead.....	H. O. Kruse, A. B.....	T. E. Genet.
Harper.....	Richard Allen.....	Hattie E. Bassett.
Hartford.....	W. D. Ross, A. M.....	W. D. Ross, A. M.
Hays City.....	L. H. Gehman, A. M.....	L. H. Gehman, A. M.
Hiawatha.....	J. M. Rhodes, A. B.....	E. O. Leatherwood.
Holton.....	Erwin E. Heath, A. B.....	E. J. Benton.
Horton.....	J. E. Dyche, A. B.....	Henry Fiegenbaum.
Howard.....	John Schurr, A. M., M. D..	John Schurr, A. M., M. D.
Humboldt.....	W. O. Brookins.....	Matilda Henrichs, A. B.
Hutchinson.....	G. W. Winans.....	E. H. Richardson.
Independence.....	S. M. Nees, B. S.....	Jeanie McKinlay.
Iola.....	W. S. Picken.....	Clifford Mitchell.
Junction City.....	Geo. W. Kendrick.....	Ida M. Hodgdon.
Kansas City.....	L. L. L. Hanks.....	Geo. E. Rose.
Kansas City, Mo.....	Jas. M. Greenwood, A. M..	Jno. T. Buchanan.
Labette county, Altamont....	.....	T. B. Hanna.
Lawrence.....	Frank P. Smith, A. M.....	Frank H. Olney, A. B.
Leavenworth.....	J. E. Klock.....	W. A. Evans.
Lyndon.....	L. A. Parke.....	L. A. Parke.
Lyons.....	F. C. Jacoby, A. M.....	Mary E. Berry.
Marion.....	B. D. Van Ostrand, B. S....	J. M. Winslow.
Marysville.....	C. C. Starr, B. S., Ph. B....	N. T. Adams, A. B.
McPherson.....	H. Winsor.....	Laura E. Humphrey, B. S.
Minneapolis.....	E. P. McMahon.....	J. H. Mustard, A. B.
Neodesha.....	G. W. Smith.....	Kate Cramer.
Newton.....	J. W. Cooper.....	D. R. Krehbiel, A. B.

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Norton .....	.....	H. M. Culter.
Oklahoma City, Ok.....	J. H. McClain.....	Mrs. S. J. Douglas, A. B.
Olathe.....	S. W. McGarrah, A. M.....	May L. Parker, B. Litt.
Osborne.....	W. H. Olin, M. Sc.....	W. H. Olin, M. Sc.
Oskaloosa.....	D. L. Stanley.....	D. L. Stanley.
Ottawa.....	Wm. M. Sinclair.....	A. D. Wilcox.
Paola.....	E. A. Farrington, A. B.....	F. W. Allin, B. S.
Parsons.....	S. D. Frazier.....	Roxie E. Clark.
Peabody.....	A. H. Bushey.....	S. A. M. Young, A. B.
Pittsburg.....	S. W. Black.....	H. H. Ewing.
Pleasanton.....	S. C. Bloss, A. B.....	S. C. Bloss, A. B.
Pratt.....	Grant Van Hoose.....	M. N. Hittle.
Sabetha.....	Isaac B. Morgan.....	Isaac B. Morgan.
Salina.....	A. Ludlum.....	M. A. Ludlum.
Sedgwick.....	J. C. Moyer.....	J. C. Moyer.
Seneca.....	J. G. Schofield.....	Mrs. L. B. Wright.
Topeka.....	W. M. Davidson.....	John L. Williams, Ph. B.
Troy.....	U. S. C. Busch, B. Sc.....	U. S. C. Busch, B. Sc.
Valley Falls.....	J. M. Nation.....	Margaret E. Menet, A. B.
Washington.....	H. W. Charles.....	E. L. Enochs.
Wathena (union).....	.....	Geo. W. Kinkead.
Wellington.....	H. F. M. Bear, A. B.....	T. W. Butcher, A. B.
Winfield.....	J. W. Spindler, A. M.....	M. E. Hickey, A. B.
Wichita.....	Frank R. Dyer, A. M.....	Frank R. Dyer, A. M.
		Total in list I, 78.

ACADEMIES.

<i>Name of academy.</i>	<i>Location.</i>	<i>Principal.</i>
Arkansas City Academy.....	Arkansas City.....	C. P. Hendershot, A. B.
Friends' Academy.....	Tonganoxie.....	Richard Haworth, B. L.
Hesper Academy.....	Hesper.....	Mary Doan, M. S., B. L.
Hiawatha Academy.....	Hiawatha.....	L. E. Tupper, A. M.
Lewis Academy.....	Wichita.....	J. M. Naylor, A. M., Ph. D.
Wentworth Military Academy,	Lexington, Mo.....	Sanford Sellers, M. A.
Friends' Academy.....	Washington.....	May Pemberton, Ph. B., B. L.
Stockton Academy.....	Stockton.....	F. E. Sherman, A. B., B. D.
Southern Kansas Academy...	Eureka.....	L. C. Wooster.
		Academies in list I, 9.

II. Names of high schools reporting courses which fall short of preparing for the Freshman class, School of Arts, by not more than the amount of three terms' work, are as follows:

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Alma.....	H. W. Jones, B. Sc.....	H. W. Jones, B. Sc.
Argentine.....	C. R. Sortor.....	S. M. Simmons, A. B.
Asherville.....	.....	S. F. Tucker.
Axtell.....	J. E. Cook.....	J. E. Cook.
Belleville.....	C. C. Canfield.....	J. Z. Gilbert, Ph. B., A. M.
Burlingame.....	C. S. Fowler.....	Roy Holtz.
Burrton.....	.....	H. C. Campbell.
Centralia.....	Geo. C. Baker, A. B.....	Geo. C. Baker, A. B.
Clyde.....	S. V. Mallory.....	S. V. Mallory.
Cherry Vale.....	Homer S. Myers, A. B.....	Irene Beckley.
Colby.....	.....	R. A. Elwood, B. D.
Columbus.....	John Curran.....	E. L. Enloe.
Delphos.....	.....	Theo. H. Scheffer, A. B.
Ellsworth.....	R. F. Malaby.....	.....

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Enterprise.....	H. M. Ambrose, A. M.....	H. M. Ambrose, A. M.
Eureka.....	G. A. Bower.....	Jessie Brookover.
Garnett.....	F. McClellan.....	Irwin Stimmel.
Herington.....	W. W. Ramey.....	Clara Williams.
Hill City.....	.....	John S. Dawson.
Kiowa.....	J. C. Kenwell.....	J. C. Kenwell.
Lakin.....	.....	E. W. Kelley.
Lincoln.....	W. L. Helton, M. S.....	O. J. Morganson.
Moran.....	.....	S. L. Fogleman.
Mound Valley.....	Chas. H. Williams.....	Chas. H. Williams.
Osawatomie.....	R. S. Russ.....	Lizzie Boyle.
Phillipsburg.....	.....	W. G. Riste.
Sedan.....	J. A. Ferrell, B. S.....	C. D. Shukers.
Smith Centre.....	.....	J. N. Mosher.
Solomon.....	L. H. Wishard.....	Carrie Matson.
Sterling.....	W. J. Hull.....	W. J. Hull.
Wamego.....	E. L. Cowdric, B. D.....	E. P. Barrett.
Waverly.....	.....	Geo. R. Crisman.
White Cloud.....	W. H. Greider.....	W. H. Greider.

Total in list II, 33

Special Students.

Persons of mature years (at least 21 years of age) and character, who desire for reasons satisfactory to the Chancellor or the Faculty to pursue some special line of study, without becoming candidates for a degree, are allowed to enter as special students. Such students must file with the Registrar of the University, prior to entering classes, a statement of the work which they desire to pursue, and a written statement from the instructors under whom work is to be carried that the student is prepared to undertake the work specified. No entrance examinations are required of such special students further than may be necessary to satisfy the instructors under whom the studies may be taken. With the advice and consent of the Faculty, special students may carry other studies than that in which they are specializing, provided such studies are closely connected with their special work and necessary to it.

Special students are subject to the same regulations as regular students with regard to the quality of work performed, and attendance at recitations and examinations, but not as to the number of studies to be pursued. The Faculty may at any time deprive any special student of his privileges if it appears that he is abusing or neglecting them.

Registration.

All candidates for admission to the Freshman class having high-school certificates, and all students of the University intending to pursue their studies in the ensuing year, must present themselves for registration at the University on Wednesday and Thursday, September 9 and 10, 1896. Registration at a later

date will be permitted only on the presentation of a satisfactory reason for the delay.

Times and Places of Examination.

Candidates for the Freshman class not presenting the required certificates, will be examined at the University, Lawrence, either on Thursday and Friday, June 11 and 12, 1896, or on Wednesday and Thursday, September 9 and 10, 1896. Candidates will be examined at other times only on giving to the Registrar a satisfactory reason for nonattendance at the appointed examinations. The following is the schedule of examinations in June and in September:

THURSDAY, JUNE 11, or WEDNESDAY, SEPTEMBER 9.

- 9-10. English.
- 10-11. Algebra.
- 11-12. French.
- 12-1. Physical Geography.
- 2-3. German.
- 3-4. Civil Government.

FRIDAY, JUNE 12, or THURSDAY, SEPTEMBER 10.

- 9-10. Geometry.
- 10-11. Latin.
- 11-12. Outlines of History.
- 2-3. Greek.
- 3-4. Physics.

Candidates for admission may divide the examination between two years, or between June and September of the same year, under the following conditions: The applicant may present himself at the preliminary for examination in any or all of the prescribed subjects, and if he is successful in five or more subjects, he need not be again examined in them.

Admission to Advanced Standing.

I. *By Examination.* A candidate may be admitted to the Sophomore, Junior, or Senior class, if he appear on examination to be prepared in the following studies: (1) In the studies required for admission to the Freshman class. (2) In all prescribed studies already pursued by each class for which he offers himself; and in as many optional studies as he would have pursued if he had entered at the beginning of the course.

II. *Without Complete Examination.* Graduates or students from the higher classes of other colleges may be admitted to advanced standing upon the presentation of a certificate stating in detail the work done, under such conditions as the Faculty may determine to be just in each case, upon consideration of the applicant's previous course of study, and of the evidence he pre-

sents of his proficiency in that course. For information on this subject, application should be made to the Registrar of the University.

Undergraduates from other colleges must present certificates of honorable dismissal, or other satisfactory evidence of good character.

It is required of all candidates for the first degree that the last year be spent in residence at the University.

Course of Study Leading to the Degree of Bachelor of Arts.

The following is an outline of the studies prescribed for the degree of bachelor of arts. These studies are described more in detail in the account of courses offered by the several departments. The Roman numerals below correspond to the numerals used in the detailed account of courses.

Freshman Year.

(Each academic year is divided into two terms.)

FIRST TERM.

Mathematics (Algebra) I, at 8 or 11.

English (B) I, at 8 or 11.

Hygiene, 20 lectures, at 4.

Physical Culture, three days a week, at 9 or 11.

Elocution or Voice Training.

One of the following:

French I, III, German III, Greek III, V, Latin I, III, at 10.

French I, V, German I, V, Greek I, Latin I, III, at 12.

SECOND TERM.

English (A) I, at 8 or 12.

Mathematics (Trigonometry) II (*a), at 8 or 11.

Chemistry I (*b), at 11.

Elocution or Voice Training.

Physical Culture, three days a week, at 9 or 11.

One of the following:

French II, IV, German IV, Greek IV, VI, Latin II, IV, at 10.

French II, VI, German II, VI, Greek II, Latin II, IV, at 12.

Throughout his entire Freshman year, the student is required to carry at least one foreign language. He may take any language for which he is prepared, and may begin French, German,† or Greek. See list of courses in the languages.

Freshmen offering three years of English do not take the English of the Freshman year, but must take, in place of the English of the first term, Sophomore history or a second foreign language, and, in place of the English of the second term, botany or zoology, or a second foreign language, subject to the regulation

* (a) means first half of term; (b) means second half of term.

† Students who have not completed the full three years of Latin for entrance will not be admitted to the class in beginning German.

regarding choice of courses from the two groups of the Sophomore year.

Sophomore Year.

FIRST TERM.

Group A:

French I, III, German III, Greek III, V, Latin I, III, at 10.

French I, V, German I, V, Greek I, Latin I, III, at 12.

Group B:

Mathematics III, at 8.

History IV, at 9.

Chemistry II, at 2-4.

Botany III, at 2-4.

SECOND TERM.

Group A:

English (A) II, French II, IV, German IV, Greek IV, VI, Latin II, IV, at 10.

English (A) II, French II, VI, German II, VI, Greek II, Latin II, IV, at 12.

Group B:

Mathematics IV, at 8.

Logic and Psychology, at 9.

Surveying, at 11.

Zoology, at 3.

Botany I, at 10 to 12.

In the Sophomore year, all the language courses constitute what is known as "Group A"; all other courses are included in "Group B."

The work of the Sophomore year shall consist of six themes, physical culture three days a week, and six full terms' work. The six full terms' work shall be chosen from groups A and B, not more than four terms' work from either group.

At the end of the Sophomore year, the student must have done some work in the school, in at least two languages other than English.

Junior and Senior Years.

Each Junior and Senior is required to write two forensics, or equivalent theses, each term, in addition to which he must pursue in each term three full studies, or their equivalent, chosen by himself from the list of optional studies, in accordance with the following regulations:

In his Junior and Senior years the student shall be free in his choice of optional studies, but may not take more than four terms' work in one department or under one instructor. The following are the departments in which optional studies are offered:

1. Botany and Entomology.
2. Zoology.
3. Historical Geology, Anatomy, and Physiology.

4. Physical Geology, Mineralogy, and Petrography.
5. Chemistry and Metallurgy.
6. Civil Engineering.
7. Physics.
8. Mathematics and Astronomy.
9. Philosophy.
10. History and Sociology.
11. American History and Civics.
12. Greek.
13. Latin.
14. German.
15. French.
16. English.
17. Pharmacy.
18. Pedagogy.
19. Music, Harmony and Composition.
20. Spanish.

List of Optional Courses.

NOTE.—(a) means that the study occupies the first half term, (b) the last half term. Unless otherwise stated, all courses are open to Juniors and Seniors.

1.—Botany and Entomology.

I. Elementary Structural Botany.—Laboratory work 10 hours per week and lectures. Field exercises. 2d term. Every day, 10 to 12. Open to Freshmen who have had three years of English and to Sophomores. Professor Stevens and Mr. Barber.

II. Cryptogramic Botany.—Laboratory work 10 hours per week and lectures. 1st term. Every day, 3 to 5. Open to students who have taken course I. Mr. Barber.

III. Histological Botany.—Laboratory work 10 hours per week and lectures. 1st term. Every day, 8 to 10 and 10 to 12. Open to students who have taken course I. Professor Stevens.

IV. Physiological Botany.—Laboratory work 10 hours per week and lectures. 2d term. Every day, 8 to 10. Open to students who have taken courses I and III. Professor Stevens.

V. Advanced Botany.—Special laboratory course. Ten weeks, 10 hours a week, by appointment. Open to students who have taken courses I and II. Mr. Barber or Professor Stevens.

VI. Fungi, Bacteria, and the lower forms especially.—1st term (a), 3 to 5. Mr. Barber.

VII. Entomology.—Introductory laboratory course. Comstock and Kellogg's Elements of Insect Anatomy. 1st term. Ten hours a week, 2 to 5. Mr. W. A. Snow.

VIII. Entomology.—General course. Lectures, practical ex-

ercises, and recitations. Special attention to insects of economic importance in Kansas. 2d term. Every day, at 11. Mr. W. A. Snow.

IX. Entomology.—Special laboratory course. Thesis work in anatomy, classification, or life histories. Ten hours a week, by appointment, for entire year. Course IX must be preceded by course VII. This course is especially adapted for graduate work. Mr. W. A. Snow.

2.—Zoology and Anatomy.

I. Zoology.—Packard's Advanced Course and Jordan's Manual of Vertebrates. Laboratory work. Practice in the field. Open to Sophomores. 2d term. Every day, 3 to 5. Professor Dyche.

II. Vertebrate Anatomy.—1st term. Laboratory work. Every day, 2 to 4. Professor Dyche and Mr. Gowell.

3.—Historical Geology and Physiology.

I. Historical Geology.—Lectures. Dana's Manual, 4th edition. 1st term (b). Every day, at 11. Must be preceded by physical geology (Professor Haworth), or its equivalent. Professor Williston.

II. Systematic Paleontology.—Lectures and laboratory work. Williams's Geological Biology, Zittel's Handbook. 2d term. Every day, at 4. Must be preceded by course I, or its equivalent. Professor Williston.

III. Histology.—2d term. Laboratory work and lectures. Every day, 2 to 4. Professor Williston.

IV. Physiology.—1st term (b). Lectures. Martin's Human Body. Every day, at 10. Professor Williston.

V. Special Work in Vertebrate Anatomy, Recent or Fossil.—Throughout the year, at the option of the instructor. For graduates only. Professor Williston.

VI. Field Work in Paleontology.—For advanced students only. Such work, if sufficiently meritorious, will be credited as equal to one study pursued in the University for double the length of time spent in the field. Summer months. Professor Williston.

4.—Physical Geology, Mineralogy, and Petrography.

I. Elements of Mineralogy and Petrography.—Daily lectures and laboratory work. An elementary course, including crystallography, blowpipe analysis, and the study of building stone. Required of students in C. E. course, and preparatory to II and III. 1st term. Every day, 9 to 11. Professor Haworth.

II. Systematic Mineralogy.—Daily lectures and laboratory

work. To follow I. 2d term (*a*). Every day, at 10. Professor Haworth.

III. Elementary Petrography.—Daily lectures and laboratory work. To follow I, and may follow II, or be taken as a parallel study. 2d term (*a*). Every day, 11 to 1. Professor Haworth.

IV.—Elements of Physical Geology.—Daily lectures. An elementary course preliminary to elements of historical geology. 1st term (*a*). Every day at 11. Professor Haworth.

V. Economic Geology.—Daily lectures. (Must be preceded by I or II, or an equivalent.) 2d term (*a*). Every day, at 2. Professor Haworth.

Field work in geology and mineralogy, as described under IV, graduate courses, may be begun by undergraduate students who are sufficiently advanced. It is very desirable that students working in this group elect a portion of the work offered by the department of historical geology and anatomy, or the 10-weeks course in assaying given by the department of chemistry.

Graduate Courses.—For graduate students of this and other institutions who have completed the undergraduate work in groups 3 and 4, as described above, or its equivalent:

I. Advanced Mineralogy.—Lectures and laboratory work. For students who have completed I and II, in group 4, or their equivalent. 1st term and 2d term (*a*). By appointment. Professor Haworth.

II. Advanced Petrography.—Lectures and laboratory work. For students who have completed I, II, and III, in group 4, or their equivalent. 1st term and 2d term (*a*). By appointment. Professor Haworth.

III. Dynamic Geology.—Daily lectures. This course is adapted for advanced students only, especially those who are preparing themselves for teachers of geology. 1st term (*b*). By appointment. Professor Haworth.

IV.—Field Work in Geology, Mineralogy, and Petrography.—For advanced students only. At present, work in geology will be confined to Kansas; but work in the other branches may be done elsewhere. Each student will be given a special area or problem to investigate, under the advice and assistance of the head of the department. Such field work, if sufficiently meritorious, will be credited as equal to one study pursued in the University for double the length of time actually spent in the field. Spring term (*b*) and summer months. Professor Haworth.

5.—Chemistry.

I. Chemistry.—Study of chemical elements and their compounds. Remsen's Briefer Course in Chemistry. Experimental lectures. Laboratory work one afternoon a week. Required of Freshmen. 2d term (*b*). Every day, at 11. Professor Bailey.

II. Chemistry.—Lectures and laboratory work. Remsen's Briefer Course in Chemistry. Required of preparatory medical and Junior Pharmacy students. 1st term. Every day, at 10. Professor Franklin.

III. Qualitative Analysis.—Medicus's Qualitative Analysis. One lecture a week, and laboratory work. Open to Sophomores. 1st term. Every day, 2 to 4. Professor Bailey and Mr. Whitten.

IV. Pharmaceutical Quantitative Analysis.—Required of Senior pharmacy students. This course should be preceded by course II. 2d term (*a*). Every day, at 2. Professor Franklin.

V. Quantitative Analysis.—Fresenius's or Cairns's Quantitative Analysis. Laboratory work 10 hours per week, at the convenience of the instructor and student. Either 1st or 2d term. 1st term, Professor Bailey. 2d term, Professor Franklin.

VI. Quantitative Analysis: to be preceded by III.—The last half of this term may be devoted to some special topic, as water analysis, iron analysis, or sugar analysis. Laboratory work 10 hours per week, at the convenience of the instructor and student. Either 1st or 2d term. 1st term, Professor Bailey. 2d term, Professor Franklin.

VII. Inorganic Chemistry.—Remsen's Advanced Course. Required of Senior electrical engineers. 1st term. Every day, at 11. Professor Bailey.

VIII. Organic Chemistry.—Remsen's Organic Chemistry and Orndorff's Manual. Lectures Monday, Wednesday, and Friday, at 4. Laboratory work Tuesday and Thursday afternoons. 2d term. Professor Franklin.

IX. Toxicology.—Lectures. 2d term (*b*). Every day, at 12. Professor Bailey.

X. Assaying.—Laboratory work 10 hours a week. Brown's Assaying. 2d term (*a*). At convenience of instructor. Professor Franklin.

XI. Organic Preparations.—Laboratory work in organic chemistry. 1st and 2d terms. Ten hours per week, at the convenience of the instructor. Professor Franklin.

XII. Sanitary and Applied Chemistry.—Study of air, potable waters, fuels, disinfectants, foods and their adulterations, methods for preserving and cooking food products, chemical processes of digestion, etc. Lectures, themes, and laboratory demonstrations. Counting as a full study. 2d term. Tuesday, Thursday, and Friday, at 9. Professor Bailey.

XIII. The Chemistry of Sugar Manufacture.—2d term (*b*). Every day, from 3 to 5. Professor Franklin. This course should be preceded by quantitative analysis.

6.—Civil Engineering.

I. Analytical Mechanics.—1st term. Every day, at 11. Mr. Murphy.

II. Resistance of Materials.—2d term. Every day, at 10. Mr. Murphy.

III. Mechanics of Fluids.—1st term (*a*). Every day, at 10. Mr. Murphy.

IV. Roofs and Bridges.—1st term. Every day, from 2 to 4. Professor Marvin.

V. Engineering Design.—2d term. Every day, from 2 to 4. Professor Marvin.

VI. Surveying.—2d term. Every day, at 11. Open to Sophomores. Professor Marvin and Mr. Emch.

VII. Field Engineering.—1st term. Every day, at 12. Professor Marvin and Mr. Emch.

VIII. Location of Railways.—First three-fifths of the 2d term. Every day, at 9. Professor Marvin.

IX. Roads and Pavements.—Last two-fifths of the 2d term. Every day, at 9. Mr. Murphy.

X. Sanitary Engineering.—1st term (*b*). Every day, at 11. Professor Marvin.

XI. Water Supply.—2d term (*a*). Every day, at 11. Mr. Murphy.

XII. Masonry.—1st term (*a*). Every day, at 11. Professor Marvin.

XIII. Irrigation.—2d term. Every day, at 12. Mr. Murphy.

XIV. Geodesy.—1st term. Every day. Professor Marvin.

7.—Physics.

I. Mechanics, Sound, and Static Electricity.—Lectures and experimental demonstrations. Laboratory work three hours a week. 1st term. Every day, at 12. Professor Blake, Mr. Dunstan, and Mr. Rice.

II. Electricity and Magnetism, Heat and Light.—Lectures and experimental demonstrations. Laboratory work three hours a week. 2d term. Every day, at 12. Professor Blake, Mr. Dunstan, and Mr. Rice.

*III. Heat.—Advanced laboratory work 10 hours a week. 1st term. Every day, at 2. Professor Blake and Mr. Dunstan.

*IV. Optics.—Advanced laboratory work 10 hours a week. 2d term. Every day, at 2. Professor Blake and Mr. Dunstan.

*Not to be taken except upon consultation with the instructor.

*V. Electricity.—Application of Ohm's law. Laboratory work 10 hours a week. 1st term. Every day, at 2. Professor Blake, Mr. Dunstan, and Mr. Rice.

*VI. Mechanics and Sound.—Laboratory work 10 hours a week. 2d term. Every day, at 2. Professor Blake and Mr. Dunstan.

*VII. Dynamo-electric Machinery.—Two lectures and 10 hours of laboratory work a week. S. P. Thompson's Dynamo-electric Machinery and Fleming's Alternate Current Transformer. Throughout the year. Monday and Tuesday, at 4. Professor Blake.

*VIII. Thermo-dynamics, including the Theory of and Practice with the Steam Engine Indicator.—Du Bois Roentgen's Thermo-dynamics. Throughout the year. Monday, Wednesday, and Friday, at 9. Professor Blake.

*IX. Mathematical Theory of Electricity and Magnetism.—2d term. Every day, at 4. Professor Blake.

*X. Manipulation of Physical Demonstration Apparatus.—Laboratory work. 1st term. Every afternoon. Professor Blake and Mr. Dunstan.

Physics X is designed for Seniors who intend to become teachers.

XI. Electrical Measurements.—2d term. Every day, at 10. Mr. Dunstan.

XII. Machine Design.—Wednesday, at 9. Mr. Ward.

XIII. Theory of Alternate Currents.—2d term. Every day, at 11. Mr. Rice.

Physics III, IV, V, VI, must be preceded by physics I and II.

8.—*Mathematics and Astronomy.*

MATHEMATICS.

I. Algebra.—Wells. 1st term, to Christmas vacation. Every day, at 8 and 11. Required of all Freshmen. Professor Miller, Professor Newson, and Mr. Rice.

II. Trigonometry.—Miller. From Christmas vacation to middle of second term. Every day, at 8 or 10. Required of all Freshmen. Professor Miller, Professor Newson, and Mr. Rice.

III. Analytic Geometry.—1st term. Every day, at 8. Must be preceded by I and II. Professor Newson.

IV. Calculus.—Osborne. 2d term. Every day, at 8. Must be preceded by III. Professor Miller and Professor Newson.

V. Modern Geometry.—Scott. 2d term. Every day, at 11. Must be preceded by III. Professor Newson.

VI. Theory of Equations.—Burnside and Panton. 1st term.

*Not to be taken except upon consultation with the instructor.

Every day, at 12. Must be preceded by III and IV. Professor Miller.

VII. Advanced Calculus.—Williamson. 2d term. Every day, at 11. Must be preceded by IV. Professor Newson.

VIII. Differential Equations.—1st term. Every day, at 11. Must be preceded by IV. Professor Newson.

Courses V and VI are given in alternate years with courses VII and VIII. VII and VIII will be given in 1896-'97.

GRADUATE COURSES.

The department offers the following courses which students are advised not to attempt until they have completed all of the above courses:

IX. Theory of Functions and Elliptic Functions.—1st term. Every day, at 12. Professor Newson.

X. Theory of Curves and Surfaces.—Salmon. 2d term. Every day, at 12. Professor Newson.

XI. Quaternions.—Hardy. 1st term. Every day, at 12. Professor Miller.

XII. History of Mathematics.—Ball. Reading course, to count as a half course.

ASTRONOMY.

I. Descriptive Astronomy.—Lectures and recitations, with occasional evenings for observation. Young's Astronomy. 1st term. Every day, at 11. Professor Miller.

II. Practical Astronomy, including the Theory of Least Squares.—Use of a sextant and transit instrument, determinations of time, latitude and longitude, etc. Doolittle's Practical Astronomy or Barlow and Bryan's Mathematical Astronomy. 2d term. Every day, at 11. Must be preceded by astronomy I, and by mathematics III and IV. Professor Miller.

III. History of Astronomy.—Reading course, to count as a half course. Professor Miller.

9.—*Philosophy.*

I. Elementary Logic and Psychology.—Open to Sophomores. 2d term. Every day, at 9. Professor Templin.

II. Experimental Psychology.—1st term. Every day, at 2. Professor Templin.

III. Ethics.—1st term. Every day, at 3. Professor Templin.

IV. History of Philosophy.—2d term. Every day, at 12. Professor Templin.

V. Advanced Logic.—2d term (*a*). Every day, at 10. Professor Templin.

VI. Metaphysics.—2d term (b). Every day, at 10. Professor Templin.

VII. Aesthetics.—1st term (b). Every day, at 4. Professor Templin.

10.—History and Sociology.

I. Sociology (dynamic and descriptive).—1st term. Every day, at 9. Professor Blackmar.

II. Advanced Political Economy (theory and history).—1st term. Every day, at 10. Professor Blackmar.

III. French and German History.—1st term. Every day, at 10. Professor Adams.

IV. English History (Sophomore optional).—1st term. Every day, at 9. Professor Adams.

V. History of Institutions.—1st term. Every day, at 11. Professor Adams.

VI. Elements of Political Economy.—1st term. Every day, at 11. Professor Blackmar.

VII. Questions in Practical Sociology.—2d term. Every day, at 9. Professor Blackmar.

VIII. Unsettled Questions in Economics (with statistics).—2d term. Every day, at 10. Professor Blackmar.

IX. The Renaissance and the Reformation.—2d term (a). Every day, at 10. Professor Adams.

X. English Constitutional History.—2d term (b). Every day, at 10. Professor Adams.

XI. Political History of Modern Europe.—2d term. Every day, at 11. Professor Adams.

XII. Federal Government and the French Revolution.—2d term. Every day, at 12. Professor Adams.

XIII. Money and Banking.—2d term (a). Every day, at 11. Professor Blackmar.

XIV. Taxation.—2d term (b). Every day, at 11. Professor Blackmar.

XV. Economic Seminary for Advanced Students in Political Economy and Sociology. Meets in Spooner library Mondays, at 7:30 p. m.

ADVANCED COURSES.

I. Economics.—Open to graduates and to students who have taken undergraduate courses VI, VIII, XIII, and XIV. A seminary will be conducted in connection with this course, which will meet regularly once each week. Professor Blackmar.

II. Political and Social Institutions.—Open to graduates, and to students who have taken undergraduate courses I, V, VII, and X. Professors Blackmar and Adams.

II.—American History and Administration.

I. Colonial History, 1492-1763. 1st term (a), at 2. Professor Hodder.

II. The Revolution and Confederation.—1st term (b), at 2. Professor Hodder.

III. Constitutional Law.—2d term (a), at 2. Not necessarily preceded by either course I or II. Professor Hodder.

IV. International Law.—2d term (b), at 2. Professor Hodder.

V. Presidential Administrations—Washington to Jackson.—1st term, at 3. Open to Seniors, and to other students who have passed course III creditably. Professor Hodder.

VI. Presidential Administrations—Jackson to Lincoln.—2d term, at 3. Continuation of course V. Professor Hodder.

VII. History of Financial and Tariff Legislation in the United States.—2d term (a), at 4. Open to students who have passed one term in political economy. Professor Hodder.

VIII. State and Municipal Government.—2d term (b), at 4. Professor Hodder.

IX. American Historical Seminary.—Open to graduates, and to students who have passed courses, III, V, and VI. Hours by appointment. Professor Hodder.

SEMINARY OF HISTORICAL AND POLITICAL SCIENCE.

General Seminary, throughout the year, at 4. For all students of the departments of History and Sociology and American History and Administration.

12.—Greek.

I. Elementary Greek.—Gleason and Atherton's First Greek Book, or White's Beginners' Book. 1st term. Every day, at 12. For Freshmen or Sophomores who enter without Greek. Mr. Sterling.

II. Continuation of course I.—Xenophon's Anabasis. Colson's Reader. 2d term. Every day, at 12. Mr. Sterling.

III. Homer's Iliad. Jebb's Introduction to the Iliad and Odyssey.—Lectures and readings. Sight reading in the New Testament. 1st term. Every day, at 10. For Freshmen who have entered with elementary Greek and the Anabasis, or Sophomores, Juniors or Seniors who are prepared for it. Professor Wilcox.

IV. Selections from Herodotus and Thucydides. Cox's Greeks and Persians, and Athenian Empire.—Lectures and readings. Sight reading in the New Testament. 2d term. Every day, at 10. To follow course III. Mr. Sterling.

V. Plato's Apology and Crito. The Philippics of Demosthenes.

—Private reading of Butcher's Demosthenes, and on Plato. Sight reading. 1st term. Every day, at 10. Open to all who have taken courses III and IV. Mr. Sterling.

VI. Euripides, Iphigenia in Tauris; Sophocles, Antigone, and Oedipus Tyrannus.—Verrall's Manual of Greek Tragedy. Lectures on the Greek theater. Sight reading. 2d term. Every day, at 10. Open to all who have taken courses III and IV. Professor Wilcox.

VII. Greek Oratory.—Jebb's Attic Orators and Selections from Attic Orators. 1st term. Every day, at 11. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Not given in 1896-'97. Mr. Sterling.

VIII.—Homer's Odyssey.—Critical interpretation. Sight reading. 2d term. Every day, at 9. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1895-'96. Professor Wilcox.

IX. Aristophanes.—Clouds, Acharnians, and Selections. Lectures and private reading on comedy and Attic history. 1st term. Every day, at 11. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1896-'97. Mr. Sterling.

X. Plato.—Gorgias and Purvis's Selections. Critical interpretation of the first, rapid reading of the rest. Lectures and private reading on Greek philosophy. 2d term. Every day, at 3. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1896-'97. Professor Wilcox.

XI. The Greek in English.—The elements of Greek, with special reference to English. This course covers the elements of inflection and syntax, and serves as an introduction to the following course. 1st term. Every day, at 4. Open to Juniors and Seniors who have had no Greek. Professor Wilcox.

XII. Attic Greek.—Stories and legends and selections from prose authors. Translation: so much grammar only as is required by the text read. 2d term. Every day, at 9. Open to Juniors and Seniors who have taken course XI. Mr. Sterling.

XIII. History of Greek Literature, through translations.—Recitations, lectures, private reading, writing of themes. 2d term. Every day, at 2. Open to all Juniors and Seniors. Professor Wilcox.

XIV. History of Greek Art.—Recitations, lectures, private reading, writing of themes. 1st term. Every day, at 9. Open to all Juniors and Seniors. Professor Wilcox.

XV. History of the Drama.—1st term. Every day, at 2. Lectures, private reading, writing of themes. Open to all Juniors and Seniors. Professor Wilcox, in conjunction with Professors Holmes, Dunlap, Canfield, and Carruth.

Greek Symposium.—All Greek students in the University meet once every two weeks in a united class to listen to lectures, essays or readings on subjects of more general interest than special class work, or of such a character as to need a larger amount of illustrative material than is available in the class room. The subjects treated range over the whole field of language, literature, art, life, institutions and history of the Greeks, from the earliest times down to the present day, together with their influence on other peoples.

13.—*Latin.*

I. Livy (two books).—Class work: Critical reading, twice a week; rapid reading, once a week; prose composition based on the text read, once a week; grammar and sight reading, alternately, once a week. Private reading: Caesar, *Bellum civile*, book I. First term. Open to Freshmen. Every day, at 11. Miss Oliver.

II. Horace (selections).—Class work: Critical reading, twice a week; rapid reading, once a week; prose composition, prose equivalents of certain selections read, once a week; grammar and sight reading, alternately, once a week. Private reading: Cicero, *De Senectute*. 2d term. Open to Freshmen. Every day, at 11. Miss Oliver.

III. Pliny's Letters.—Class work: Critical reading, twice a week; rapid reading, once a week; prose composition based on a Latin text, once a week; grammar and sight reading, alternately, once a week. Private reading: Cicero's Letters. 1st term. Open to Sophomores. Every day, at 10. Professor Holmes.

IV. Lyric Poets (selections).—Class work: Critical reading, twice a week; rapid reading, once a week; prose composition based on a Latin text, once a week; grammar and sight reading, alternately, once a week. Private reading: Ovid (selections). 2d term. Open to Sophomores. Every day, at 10. Professor Holmes.

V, VI, VII, VIII. Seminary: Advanced work in Latin.—This work proceeds with the double aim of fitting for post-graduate study and for the practical work of Latin instruction. Method, departmental. Work varied each year. Department studied in 1896, Roman Satire, with Juvenal as a center. Department selected for study for 1896-'97, Roman Historians. Center of work for 1st term, Tacitus; for 2d term, Livy and Sallust. Critical reading, once a week; rapid reading, once a week; practical exercises in turning Latin into English and English into Latin at hearing, once a week; critical interpretation of selected portions of the author's text by the aid of some of the leading editions and other authorities, constituting an introduction to the use of critical methods and apparatus, once a week; lectures on Roman his-

torians, once a week. Tests in prose composition will be set regularly throughout the whole course of the work. 1st and 2d terms. Open to Juniors and Seniors who have had courses I, II, III, and IV, or their equivalents. Every day, at 11. Professor Holmes.

IX, X. Comparative Philology.—Class work: Elementary Sanskrit, exercises in grammar and the reading of an easy text, twice a week. Lectures: Linguistic science, once a week; comparative grammar, once a week. 1st and 2d terms. Every day, at 4. Open to qualified students, upon consultation with the instructor. Professor Holmes.

XI. History of Roman Drama.—Course extending over three weeks, and given in conjunction with the other language departments of the University. 1st term. Every day, at 2. Miss Oliver.

Detailed statement of courses, methods and apparatus sent on application to the head of the department.

14.—German.

I*. Outline of Grammar (Otis), with Composition Exercises.—Brandt's Reader. 1st term. Every day, at 10 and 12. Mr. Engel and Miss Scott.

II. Brandt's Reader completed. Wilhelm Tell.—Also sight reading. 2d term. Every day, at 12. Mr. Engel and Miss Scott.

III. Karl der Grosse, Die Journalisten, Burg Neideck.—Sight reading. 1st term. Every day, at 8 and 10. Mr. Engel and Miss Scott.

IV. Wallenstein (complete), and Sight Reading from the Geschichte des dreissigjahrigen Krieges.—2d term. Every day, at 8 and 10. Mr. Engel and Miss Scott.

V. (a) Composition, Translation of Connected English (Howell's farces), half course. Mr. Engel. (b) Faust (Part I), half course.—1st term. Every day, at 12. Professor Carruth.

VI. Maria Stuart, Iphigenie, Nathan der Weise.—2d term. Every day, at 12. Professor Carruth and Miss Scott.

VII. German Literature of the Eighteenth Century.—Lectures, with reading of masterpieces out of class, with comment on more difficult works in class. Essays and criticisms by members of the class. Klopstock, Wieland, Lessing, Herder. 1st term. Every day, at 11. Open only to students who have had German III, IV. Professor Carruth.

VIII. German Literature of the Eighteenth Century (continued).—Goethe, Schiller, and the close of the century. 2d term. Every day, at 11. Professor Carruth.

*The full three years of Latin for entrance is required as preparation to German I.

IX. German Historical Novels.—Hauff, Scheffel, etc. Careful reading in class of one work by each author, others rapidly outside. Lectures on the history of the novel and on methods and schools in fiction. Theses on separate authors and on the whole course, by members of the class. 1st term. Every day, at 11. Not given in 1896-'97. Professor Carruth.

X. German Historical Novels (continued).—Freytag, Dahn, etc. 2d term. Every day, at 11. Not given in 1896-'97. Professor Carruth.

XI. Teachers' Course.—Advanced grammar, with theory and practice of language teaching. Full course. Intended especially for those who desire to fit themselves for teaching German in high schools. 1st and 2d terms. Every day. Hour not set. Professor Carruth and Mr. Engel.

XII. History of the Drama.—Lectures and readings. A course conducted by the instructors in Greek, Latin, English, French, and German, giving a view of this field of literature in five languages. 1st term. Every day, at 2.

XIII. Gothic.—Phonetics and Introduction to Germanic Philology. 1st term. Every day, at 10. Professor Carruth.

XIV. Luther.—Reading and grammatical study of the German literature of the Reformation. 2d term. Every day, at 9. Professor Carruth.

XV. Scientific German.—For engineering students. 2d term. Every day, at 8. Mr. Engel.

15.—French.

I. Grammar (Van Daell and Grandgent) and Reader (Super).—Drill in forms and elementary syntax. Elementary composition and dictation. Open to students who have never studied French. 1st term. Every day at 10 and 12. Professor Canfield, Miss Galloo, and Miss Scott.

II. Grammar and Simple Prose Texts (Mlle. de la Seigliere; Roman d'un jeune homme pauvre).—Follows I. 2d term. Every day, at 10 and 12. Professor Canfield, Miss Galloo, and Miss Scott.

III. Modern French Prose of Mérimée, Gautier, Hugo, Daudet, Pailleron, and others.—Rapid reading for acquirement of vocabulary, and advanced syntax. Dictation and practice in writing. Open to students who have had one year of French. 1st term. Every day, at 10. Professor Canfield.

IV. The Classic Drama.—Plays of Corneille, and Racine. Dictation and practice in writing. For students in their second year of French. 2d term. Every day, at 10. Miss Galloo.

V. Moliere (one-half term). French Composition and Conver-

sation (one-half term).—For students who have had two years of French. 1st term. Every day, at 12. Miss Galloo.

VI. The Seventeenth Century.—Fables, letters, memoirs, novels, sermons, satires. For students who have had two years of French. 2d term. Every day, at 11. Professor Canfield.

VII. The Romantic School: 1800-1835.—A. de Vigny, Chateaubriand, Lamartine, Hugo, A. de Musset. Open to students who have had two years of French. 1st term. Every day, at 9. Professor Canfield.

VIII. The Development of the Novel.—Hugo, George Sand, Balzac. Open to students who have had two years of French. 2d term. Every day, at 9. Professor Canfield.

IX. Advanced Composition.—Daily exercises in writing and speaking French. 2d term. Every day, at 11. Miss Galloo.

X. History of French Literature.—Lectures, recitations, and private readings. Open to students who have had two years of French. 2d term. Not given in 1896-'97. Every day at 11. Miss Galloo.

XI. History of the Drama.—In conjunction with Professors Wilcox, Holmes, Dunlap, and Carruth. 1st term. Every day, at 2.

XII. Scientific French.—For engineering students. 1st term. Every day, at 11. Miss Scott.

16.—*English.*

A.—ENGLISH LITERATURE.

I. History of English Literature.—Pancoast's Introduction to English Literature; lectures on English language history. 2d term. Every day, at 8 and 12. Required of all Freshmen except those admitted with three years of English. Mr. Jones and assistant.

II. Eighteenth Century Literature.—Gosse's History of Eighteenth Century Literature; Hale's Longer English Poems. 2d term. Every day, at 10 and 12. Open to Sophomores. Mr. Jones.

III. Bacon and Milton.—Bacon's Essays, or Advancement of Learning; Milton's Minor Poems and Paradise Lost. 1st term. Every day, at 10. Mr. Jones.

IV. Shakspeare.—Three plays. 1st term. Every day, at 10. Professor Dunlap.

V. Shakspeare.—Three plays. 2d term. Every day, at 10. Professor Dunlap.

VI. American Literature.—Philosophy and criticism. Lectures, recitations, reports upon authors read, and discussions. 1st term. Every day, at 9. Professor Hopkins.

VII. Chaucer and Spenser.—2d term. Every day, at 11. Professor Dunlap.

VIII. English Literature of the Nineteenth Century.—1st term. Every day, at 11. Professor Dunlap.

IX. History of the Drama.—Lectures and readings. 1st term. Every day, at 2. Course conducted by the instructors in Greek, Latin, English, French, and German.

X. Development of English Criticism.—1st term. Every day, at 11. Professor Hopkins.

All courses except I and II are Junior and Senior optionals, and are open only to those who have completed courses I and II, or their equivalent.

B.—RHETORIC AND ENGLISH LANGUAGE.

I. Rhetoric.—Genung's Outlines of Rhetoric; English composition with themes and exercises. 1st term. Every day, at 8 and 11. Required of all Freshmen except those admitted with three years of English. Mr. Jones and assistant.

II. Anglo-Saxon.—Bright's Anglo-Saxon Reader. 1st term. Every day, at 9. Professor Dunlap.

III. Anglo-Saxon.—Bright's Anglo-Saxon Reader. 2d term. Every day, at 9. Professor Dunlap.

IV. Middle English.—Morris's Specimens of Early English, part I. 1st term. Every day, at 10. Professor Hopkins.

V. Middle English.—Morris and Skeat's Specimens of Early English, part II; Skeat's Piers Plowman. 2d term. Every day, at 11. Professor Hopkins.

VI. Advanced English Composition.—Lectures, exercises, theses; practical and individual criticism as to structure and style of each student's written work. 2d term. Monday, Wednesday, and Friday, at 9. Meetings for discussion, at 8. Counts as a full study. Professor Hopkins and Mr. Jones.

VII. Course in Invention, for Teachers.—Development, methods, and theories of invention; practice in logical and esthetic criticism required. 2d term. Monday, Wednesday, and Friday, at 10. Counts as a full study. Open only to students who have completed course VI. Professor Hopkins.

All courses except I are Junior and Senior optionals, and should be preceded by course I, and by courses I and II in English literature. Courses II, III, IV and V should be preceded by courses I and II in German, or their equivalent; and courses IV and V should be preceded by courses II and III.

THEMES AND FORENSICS.

Freshman Requirements.—Of each member of the Freshman class in the School of Engineering are required in the second

term three themes* of not less than 1,000 words each. These themes will be due on the following dates: February 12, March 19, April 23, 1897.

Sophomore Requirements.—Of each member of the Sophomore class are required in each term three themes* of not less than 1,000 words each. These themes will be due on the following dates: First term, October 9, November 13, December 11, 1896; second term, February 12, March 19, April 23, 1897.

Junior and Senior Requirements.—Of each member of the Junior and Senior classes are required in each term two theses* or forensics of not less than 2,000 words each. These papers will be due on the following dates: First term, October 16, December 4, 1896; second term, February 26, April 23, 1897.

Lectures on Forensics.—During the first half of the first term, a course of six lectures on forensic structure and style, accompanied with illustrative exercises, will be given weekly. Attendance will be required of Juniors, and will excuse from the first forensic of the term.

C.—ELOCUTION AND ORATORY.

I. The Elements of Vocal Expression.—Required of all Freshmen not electing vocal music. 1st term. Every Monday, at 2. Mrs. Clark.

II. Action in Oratory.—Criticism of orations and declamations. Required of all Freshmen not electing vocal music. 2d term. Every Monday, at 2. Mrs. Clark.

III. Oratory.—Practical training in the preparation and delivery of orations. Open to Sophomores, Juniors, and Seniors. 1st term. Every Friday, at 2, or at hours for private rehearsal to be arranged with the instructor. Mrs. Clark.

17.—*Pharmacy.*

I. Physiological Chemistry and Urinalysis.—Laboratory work and lectures. 2d term (*a*). Every day, 2 to 4. Professor Sayre and Mr. Wagner.

II. Pharmacy.—1st term. Tuesday and Thursday, at 9. *Materia Medica.*—Monday, Wednesday, and Friday, at 9. Professor Sayre and Mr. Wagner. *Materia Medica and Therapeutics.*—2d term. Monday, Wednesday, and Friday, at 11. Professor Sayre.

The above optionals are offered especially to those students taking collegiate work who are preparing themselves for the study of medicine.

*For lists of subjects and full instructions with reference to the preparation and presentation of themes, theses, and forensics, see the bulletin issued by the department. This bulletin also contains announcement of prizes offered in literature and debate.

18.—Pedagogy.

I. History of Education.—2d term. Every day, at 4. Professor Olin.

II. School Law.—1st term (*a*). Every day, at 3. Professor Olin.

III. Philosophy of Education.—1st term (*b*). Every day, at 3. Professor Olin.

IV. School Management.—2d term (*a*). Every day, at 3. Professor Olin.

V. Methods of Instruction.—2d term (*b*). Every day, at 3. Professor Olin.

VI. School Supervision.—Open to students who have taken courses IV and V. 1st term (*a*). Every day, at 4. Professor Olin.

VII. A Comparative Study of Educational Systems.—Open to students who have taken course I. Every day, at 4. Professor Olin.

VIII. Educational Theory.—A critical study of the educational doctrines found in the writings of Plato, Comenius, Locke, Rousseau, Pestalozzi, and Spencer. Open to graduates and students who have taken courses I and III. 1st term. Every day, at 10. Professor Olin.

IX. Seminary.—Original investigation of special subjects. Open to graduates and students who have taken courses I and III. 2d term. Hours by appointment. Professor Olin.

Courses VI and VII are open to students who have passed in courses I, IV, and V.

19.—Spanish.

I. Grammar, Reading, and Elementary Composition.—1st term. Every day, at 9. Miss Galloo.*

II. Rapid Reading, mainly in modern authors (P. A. de Alarcon, Galdos, Hartzenbusch, Juan Valera, Fernan Caballero, L. F. de Moratin).—2d term. Every day, at 9. Miss Galloo.

20.—Music.

I. Contrapuntal Harmony.—Monday and Thursday, at 11. Professor Penny.

II. Musical Composition.—Monday and Thursday, at 9. Professor Penny.

III. History of Music. Wednesday, at 2:30. Professor Penny.

*For the present, classes in Spanish are taught by Miss Galloo, assistant in French.

First-Year Medical Course.

In order to accomodate students of the University who desire to prepare for the profession of medicine, a course of study has been arranged closely related to the departments of pharmacy, chemistry, and natural history, and including materia medica, human physiology, and comparative anatomy (with dissections).

Requirements for Admission.

Students will be admitted to the first-year medical course who are ready for admission to the Freshman class of the School of Arts in all English studies.

Course of Study.

First Term:

General Chemistry.—Daily, 10 to 12. Professor Franklin.

Physiology (a).—Daily, 2 to 4. Lectures. Professor Williston.

Pharmacy and Pharmacognosy.—Daily, 9 to 10. Mr. Wagner.

Human Osteology and Vertebrate Anatomy.—Lectures and laboratory work. Daily, 2 to 4. Professor Dyche.

Second Term:

Physiological Chemistry and Urinary Analysis.—Daily (a), 2 to 5. Professor Sayre.

Botany.—Every day, at 11. Professor Stevens.

Materia Medica.—Monday, Wednesday, and Friday, 9 to 10. Professor Sayre.

Toxicology (b).—Daily, 12 to 1. Professor Bailey.

Histology.—Daily, 2 to 4. Lectures and laboratory work. Professor Williston.

During the Junior and Senior years, the student in the School of Arts may, by availing himself of the privilege in the selection of the optional courses offered him, pursue all the above courses or their equivalents, which may be accepted by medical schools in place of the first year in their regular course in medicine.

Note.—No difficulty has been experienced by students who have taken this course in obtaining admission, with proper credits, to any of the larger medical colleges of the country. Among the schools which accept the above as equivalent to the first year of their courses are: Rush Medical College, Chicago; Jefferson Medical College, Philadelphia; Kansas Medical College, Topeka; University Medical College, Kansas City, Mo.; University of Wooster Medical School, Cleveland, Ohio; Kansas City Medical College, Kansas City, Mo.; St. Louis Polyclinic.

The School of Law.

Faculty.

F. H. SNOW, President.

J. W. GREEN, Dean,

Evidence, Contracts, Commercial Paper, Partnerships, Sales, Insurance, Agency, and Bailments.

W. B. BROWNELL,

Domestic Relations and Criminal Law.

J. W. GLEED,

Real Property.

A. W. BENSON,

Pleadings and Practice.

S. A. RIGGS,

Torts, and Law of Railways.

D. M. VALENTINE,

Wills and Administration.

C. L. DOBSON,

Corporations.

JAMES HUMPHREY,

Constitutional Law.

Outline of Work.

The design of this school is to furnish a complete course of legal instruction for persons intending to practice at the bar in any state of the union. The plan of instruction includes the principles of constitutional law, international law, mercantile law, the law of contracts, corporations, insurance, torts, domestic relations, real-property law, equity jurisprudence, evidence, pleading and practice, and criminal jurisprudence.

Experience proves that the principles of law are best taught when those methods are followed which have been found most successful in teaching the sciences. Instruction is therefore given by daily recitations upon assigned portions of text-books, and the study of selected cases, the drill of the recitation room being supplemented by lectures. In addition to their law studies, the students of this school, with the consent of the Faculty, have the privilege of recitations and lectures in the School of Arts, with access to the laboratories, library, etc., subject to the rules governing "Special Students."

The complete course includes two years, each of which occupies 8½ months (excluding two weeks' recess at Christmas). For date of opening the school, see "Announcements."

All persons proposing to enter upon the study of law are earnestly recommended first to take a course of liberal studies. A good fundamental education is necessary to a successful study of law.

The following special course is suggested as helpful to students desiring to be well prepared for legal studies and practice. Candidates for admission to this course are subject to the regulations governing special students.

FIRST YEAR.

<i>First Term.</i>	Political Economy.	<i>Second Term.</i>	Constitutional Law (<i>a</i>).
	Colonial History.		International Law (<i>b</i>).
	Rhetoric.		Psychology and Logic.
			American History.

SECOND YEAR.

<i>First Term.</i>	English History.	<i>Second Term.</i>	Land Tenures.
	History of Presidential Administrations.		History of Presidential Administrations.
	English.		Statistics (<i>a</i>).
	Themes.		Political History of Europe (<i>b</i>)

Seminary work will be required throughout the year.

Requirements for Admission.

English.

U. S. History.

General History.

Examinations in these subjects will be held at the University on Thursday, September 10, 1896, beginning at 9 o'clock a. m. Graduates of colleges or universities, state normal schools, accredited high schools or academies, and persons presenting first- or second-grade teachers' certificates, are admitted without examination.

Persons who have privately completed a part of the course are admitted to advanced standing in the Junior class, on satisfying the Faculty as to their qualifications. No one will be admitted

to the Senior class as a regular member, except upon passing a satisfactory examination upon the requirements for admission, and also upon the work prescribed for the Junior class. Applicants for the degree of bachelor of laws must, in every case, have been admitted as regular members of the Senior class at the beginning of the Senior year, and must also have attended the Senior recitations during the entire year.

Students who are not candidates for a degree will be admitted to the school at any time, and without a preliminary examination, and will be permitted to take such work as they may desire, provided they satisfy the instructors under whom the work is taken that they are qualified to pursue it with profit.

Course of Study.

JUNIOR YEAR.

Constitutional Law—Cooley. Mr. Humphrey. 10 hours a week for 2 weeks.

Domestic Relations—Schouler. Professor Brownell. 6 hours a week for 6 weeks.

Contracts—Lawson. Professor Green. 10 hours a week for 8 weeks.

Agency—Mechem. Professor Green. 10 hours a week for 5 weeks.

Bailments—Story. Professor Green. 10 hours a week for 2 weeks.

Commercial Paper—Tiedeman. Professor Green. 10 hours a week for 8 weeks.

Partnerships—Parsons. Professor Green. 10 hours a week for 4 weeks.

Sales—Benjamin. Professor Green. 10 hours a week for 4 weeks.

SENIOR YEAR.

Torts—Bigelow. Mr. Riggs. 9 hours a week for 4 weeks.

Corporations—Taylor or Beach. Mr. Dobson. 9 hours a week for 2 weeks.

Real Property—Tiedeman, Williams, and Washburn. Professor Gleed. 9 hours a week for 4 weeks.

Evidence—Greenleaf. Professor Green. 9 hours a week for 5 weeks.

Pleadings—Bliss and Gould. Mr. Benson. 9 hours a week for 4 weeks.

Equity Pleadings—Field; and Equity Jurisprudence—Bispham. Mr. Humphrey. 9 hours a week for 4 weeks.

Criminal Law—May. Professor Brownell. 9 hours a week for 4 weeks.

Recitations are so arranged that students can go over any given subject twice, if they so desire. As a rule, students of the

Senior class attend the Junior recitations as well as their own.

Hours of recitation are so arranged that students, if they so desire, may enter law offices in Lawrence, attend the courts, and thus combine practical with theoretical instruction.

Moot courts are held by each class every week during the term by one of the Faculty, at each of which a cause previously assigned is taken up for practice in the conduct of causes and in the discussion of legal principles. A Kent club has been formed by the students, in which dissertations are read and cases argued.

Courses of lectures will be given during the term on various topics of municipal law, on medical jurisprudence, on federal practice, on criminal law, on the law of torts, on political science, and on international law, as supplementary to the general course of instruction.

Examinations.

The members of each class will be examined during the last week in May upon the studies of the year. The examination of the Junior class will be conducted by the Faculty; that of the Senior class, upon written questions prepared by a committee of examination appointed for that purpose. Those desiring admission to the Senior class may make application at the examination in September. The degree of bachelor of laws will be conferred upon such members of the Senior class as shall be recommended by the examining committee and the Faculty, and approved by the Board of Regents.

The School of Fine Arts.

Music, Painting, and Elocution.

Faculty,

F. H. SNOW, President.

G. B. PENNY, Dean,
Professor of Contrapuntal Harmony, Musical Composition, and
Pipe Organ.

C. A. PREYER,
Professor of Piano.

J. A. FARRELL,
Professor of Violin, Voice Culture, and Singing.

A. H. CLARK,
Professor of Drawing and Painting.

H. F. JONES,
Instructor in English.

E. F. ENGEL,
Instructor in German.

MAY PIERCE-CLARK,
Instructor in Elocution, Oratory, and Physical Training.

E. GENEVE LICHTENWALTER,
Instructor in Piano.

VIRGINIA SPENCER,
Instructor in Italian.

A. M. WILCOX,
Lecturer upon the History of Art.

This school of the University is established at Music Hall (Massachusetts street), with a corps of professors who are personally

familiar with the methods employed in the conservatories and art schools of Germany, Italy, France, and England. The school is well equipped with excellent pianos, including four concert grands, and a large two-manual organ; charts for sight-reading classes, for illustrating vocal, pianoforte and lecture courses; a good collection of plaster casts, engravings, Braun autotypes, and etchings.

The school is organized to meet the demand for better and more extended facilities for liberal education in all branches of the fine arts. Its objects are: To furnish advanced instruction to either amateur or professional students; to combine music, painting, oratory, etc., with regular collegiate work, and to train teachers. The various courses of study are carefully graded, the music courses being based upon those employed by Leschetitzky and Barth in piano, Shakspeare and Hey in voice, Dudley Buck and Clarence Eddy in organ, Max Bendix in violin, Goetschius and Prout in theory. The painting courses are similar in character and extent to those of other American schools of art.

The plan of instruction includes courses in piano, voice culture, pipe organ, artistic singing, violin, free-hand drawing, painting, modeling, decorative design, contrapuntal harmony, canon, fugue, musical composition, interpretation and conducting, history of the fine arts, the elements of form and instrumentation, oratory, Italian, German, French, physical training, elocution, and English.

Requirements for Admission to all Courses.

Physical Geography.

General History.

History of the United States.

English.—One year.

Additional Requirements for all Music Courses.

The rudiments of music and harmony through the progression of common chords, including recognition of all intervals, scales, and chords, by ear, and the contents of Mason and Mathews' Primer of Music.

Piano.—Candidates will be required to play in tempo, and with correct touch, fingering, and phrasing, selections from the following: Loeschorn, Piano Technic (ed. Peters 1416); Bach's Preludes and two-voiced inventions; Heller, ops. 46 and 45. An equivalent amount of technical acquirement, excepting Bach, may be substituted, such as Tausig's Daily Studies, bk. I, or Koehler's Piano Technic; Lebert & Stark, bks. I and II; or Schmitt, op. 16; or Koehler's Etude-School; or Loeschorn, op. 66, with Heller, ops. 47, 46.

While the adoption of any particular method of technical training is not insisted upon, particular attention is called to the fact that a correct and musical rendering of the compositions accepted for examination is expected. Furthermore, the student

must give evidence of musical talent and technical capacity to pursue the full course profitably.

Course in Piano.

Leading to the degree of bachelor of music.

FIRST YEAR.

First Term:

Piano, twice a week. Miss Lichtenwalter or Professor Preyer.
 Technic, once a week. Miss Lichtenwalter.
 Voice, class work, once a week. Professor Penny.
 Contrapuntal Harmony—Concords and Discords, twice a week.
 Professor Penny.
 English, three times a week. Mr. Jones.
 Seminary, Wednesdays. Professor Penny.
 Physical Training, twice a week. Mrs. Clark.
 Recitals and Ensemble playing.

Second Term:

Piano, twice a week. Miss Lichtenwalter or Professor Preyer.
 Technic, once a week. Miss Lichtenwalter.
 Voice, class work, once week. Professor Penny.
 Contrapuntal Harmony—Modulations, Inharmonic Tones,
 twice a week. Professor Penny.
 Free-hand Drawing, once a week. Professor Clark.
 English, twice a week. Mr. Jones.
 Seminary. Professor Penny.
 Physical Training, twice a week. Mrs. Clark.
 Recitals and Ensemble.

SECOND YEAR.

Requirements for entrance: Grades in studies of previous year; Bach's Three-voiced Inventions; Cramer; Bulow, Etudes Nos. 5, 4, 25, 33, 37; Haydn, Variations in F minor; Beethoven, Sonata op. 14, No. 2.

First Term:

Piano, twice a week. Professor Preyer.
 Technic, once a week. Professor Preyer.
 Voice (optional), once a week. Professor Farrell.
 Contrapuntal Harmony, original work with "materials," twice a week. Professor Penny.
 English, twice a week. Mr. Jones.
 German, twice a week. Mr. Engel.
 Seminary, Wednesdays. Professor Penny.
 Elocution, twice a week. Mrs. Clark.
 Recitals and Ensemble.

Second Term:

Piano, twice a week, Professor Preyer.
 Technic, once a week. Professor Preyer.

Voice (optional), once a week. Professor Farrell.
 Composition (musical forms), twice a week. Professor Penny.
 English, three times a week. Mr. Jones.
 German, twice week. Mr. Engel.
 Seminary, Wednesdays. Professor Penny.
 Elocution. Mrs. Clark.
 Recitals and Ensemble.

THIRD YEAR.

Requirements for entrance: Grades in studies of previous years; Bach, Well-tempered Clavichord, vol. 1, Prelude and Fugue in D major; Clementi's Etude in F minor (Gradus); Czerny, op. 740, Octave Study in G major; Beethoven, Sonata, op. 26, or Mozart, Concerto in D minor.

First Term:

Piano, twice a week. Professor Preyer.
 Composition (applied counterpoint—invention, choral figuration), twice a week. Professor Penny.
 Seminary, Wednesdays. Professor Penny.
 Italian (optional), twice a week. Miss Spencer.
 German (optional), twice a week. Mr. Engel.
 Oratorio, once a week. Professor Penny.
 Physical Training and Elocution (optional). Mrs. Clark.
 Recitals and Ensemble.

Second Term:

Piano, twice a week. Professor Preyer.
 Mythology and Archeology, once a week. Professor Penny.
 Composition, Fugue, Canon, twice a week. Professor Penny.
 Seminary, Wednesdays. Professor Penny.
 Oratorio, once a week. Professor Penny.
 German (optional), twice a week. Mr. Engel.
 Physical Training and Elocution (optional). Mrs. Clark.
 Recitals and Ensemble.

FOURTH YEAR.

Requirements for entrance: Grades in studies of previous years: Mendelssohn, Variations Serieuses; Beethoven, Sonata op. 31; Chopin, op. 10, Nos. 5 and 12; Kullak, Octave Study, No. 5.

First Term:

Piano, twice a week. Professor Preyer.
 Aesthetics, weekly lecture. Professor Penny.
 Composition (variation forms, rondo, sonata), twice a week.
 Professor Penny.
 Recitals and Ensemble.

Second Term:

Piano, twice a week. Professor Preyer.
 Composition (instrumentation, string quartette, overture can-

tata), twice a week. Professor Penny.
 Acoustics, 15 lectures. Professor Blake.
 History of Music, weekly lecture. Professor Penny.
 Graduating thesis.
 Graduating recital or original composition.

The work in piano, outlined in brief, is as follows: Koehler's Virtuosity Studies, Bach's Inventions, English suites, and Well-tempered Clavichord, Carl Reinecke's School of Etudes from Cramer, Clementi, Thalberg, Moscheles, etc., Kullak's School of Octave Playing; Chopin's ops. 10, 25; Rubenstein, op. 23; Liszt's Transcendentals; concert pieces, concertos, etc.; Henselt, op. 125; Liszt, Concert Etudes.

Course in Voice.

Leading to the degree of bachelor of music.

FIRST YEAR.

First Term:

Voice, three times a week. Professor Farrell.
 English, three times a week. Mr. Jones.
 Italian, twice a week. Miss Spencer.
 Seminary, Wednesdays. Professor Penny.
 Contrapuntal Harmony, twice a week. Professor Penny.
 Physical Training, twice a week. Mrs. Clark.
 Recitals.

Second Term:

Voice, three times a week. Professor Farrell.
 Contrapuntal Harmony, twice a week. Professor Penny.
 English, twice a week. Mr. Jones.
 Italian, twice a week. Miss Spencer.
 Seminary, Wednesdays. Professor Penny.
 Physical Training, twice a week. Mrs. Clark.
 Free-hand drawing, once a week. Professor Clark.
 Recitals.

SECOND YEAR.

First Term:

Voice, twice a week. Professor Farrell.
 Piano Technic, once a week. Professor Preyer.
 Contrapuntal Harmony, twice a week. Professor Penny.
 English, twice a week. Mr. Jones.
 German, twice a week. Mr. Engel.
 Seminary, Wednesdays. Professor Penny.
 Choir and Church Music, once a week. Professor Penny.
 Elocution and Physical Training, twice a week. Mrs. Clark.
 Recitals.

Second Term:

Voice, twice a week. Professor Farrell.
 Piano Accompaniment Playing, once a week. Professor Preyer.

Composition (musical forms), twice a week. Professor Penny.
 English, three times a week. Mr. Jones.
 German, twice a week. Mr. Engel.
 Seminary, Wednesdays. Professor Penny.
 Church and Choir Music, once a week. Professor Penny.
 Elocution and Physical Training, twice a week. Mrs. Clark.
 Recitals.

THIRD YEAR.

First Term:

Voice, twice a week. Professor Farrell.
 Oratorio, once a week. Professor Penny.
 Composition (applied counterpoint). Professor Penny.
 Piano, once a week. Professor Preyer.
 Seminary, Wednesdays. Professor Penny.
 Elocution and Physical Training. Mrs. Clark.

Second Term:

Voice, twice a week. Professor Farrell.
 Opera, once a week. Professor Penny.
 Composition (fugue and canon). Professor Penny.
 Piano, once a week. Professor Preyer.
 Elocution and Physical Training. Mrs. Clark.

FOURTH YEAR.

First Term:

Voice, twice a week. Professor Penny.
 Oratorio, once a week. Professor Penny.
 History of Music, weekly lecture. Professor Penny.
 Acoustics, 15 lectures. Professor Blake.
 Dramatic Action. Mrs. Clark.

Second Term:

Voice, twice a week. Professor Penny.
 Opera, once a week. Professor Penny.
 Dramatic Action. Mrs. Clark.
 Aesthetics, weekly lecture. Professor Penny.
 History of Music, weekly lecture. Professor Penny.
 Graduating thesis.
 Graduating recital.

In addition to general requirements for admission to this course, the possession of a correct musical ear is required.

Normal Course in Public-School Music and Singing at Sight.

Two Years. The study of notation, intervals, scales, singing at sight, elementary harmony, thorough study of the system used, management of children's voices, methods of teaching the subject in graded schools, etc., combined with practical drill in the classroom. Tonic sol-fa and staff notation are both used.

The first year's work is an optional with elocution, required of all Freshmen and Sophomores in the School of Arts.

The second year consists of private instruction in voice culture, in connection with class work in harmony, musical forms, semi-nary, oratorio and opera chorus of the first year in the regular vocal course.

Course in Violin.

This course is the same as the course in piano, with the exception that violin is substituted throughout for piano.

FIRST YEAR.

Herman's Violin School, vol. I.

Wichtel School, book I.

Kayser, 36 studies, book I.

SECOND YEAR.

Herman's Violin School, vol. II.

Kayser, 36 studies, books II and III.

Dont, Gradus ad Parnassum.

Schradieck, technic.

Dancla, duets.

Fantasies, by Alard and De Beriot.

THIRD YEAR.

Schradieck, scales and technic.

Kreutzer, 40 studies.

Fiorillo, 36 studies.

Mazas, artistic duets.

Concert studies by old masters. Easy arrangement of operas.

FOURTH YEAR.

Rode, 36 studies.

Dancla, 20 studies.

Classic sonatas.

De Beriot concerts.

Mendelssohn concert.

David concert pieces.

Wieniawski concert pieces.

Spohr concerts.

Vieuxtemps concert pieces.

Course in Pipe Organ.

This course is identical with the course in piano, with the exception that pipe organ is substituted for piano during the third and fourth years.

The following constitutes the special work on the organ:

THIRD YEAR.

Organ.—Manual and Pedal Studies, Dr. John Stainer (London); Dudley Buck's Choir Accompaniment; Bach's Easy Preludes and Fugues; Buck's Study in Pedal Phrasing; selections from "Church

and Concert Organist," Eddy, "The Organist," Whiting, etc. Twice a week.

Choir Drill and Accompaniment. Once a week.

FOURTH YEAR.

Organ.—Extempore playing, Bach's fugues; sonatas by Mendelsohn, Merkel, and Bach; accompaniments for solos, masses, cantatas, and oratorios; compositions by Best, Guilmant, Eddy, Ritter, Saint-Saens, Thiele, Widor, etc. Twice a week.

Course in Drawing and Painting.

Leading to the degree of B. P. (bachelor of painting).

The additional requirements for admission to this course will consist of an examination of the pupil's ability as a draughtsman.

FIRST YEAR.

Drawing in Charcoal from Solid.—Daily. Professor Clark.

English.—Three times a week. Mr. Jones.

Physical Training.—Twice a week. Mrs. Clark.

Seminary.—Wednesdays.

First steps in Perspective, Clay Modeling.—Professor Clark.

Voice, class work.—Professor Penny.

SECOND YEAR.

Drawing from Cast, Figure, Head, Interior.—Daily. Professor Clark.

English.—Twice a week. Mr. Jones.

German.—Mr. Engel.

Elocution.—Twice a week. Mrs. Clark.

Seminary.—Once a week.

Water Color.—Studies from still life and drapery.

Decorative Design.

Anatomy.—Perspective, composition, arrangement.

Sketching from Nature, in black and white.—Landscape, animals. Professor Clark.

Physical Training.—Mrs. Clark.

THIRD YEAR.

Oil, Pastel and Water-Color Studies.—From fruit, game, still life, drapery, and interior.

Mythology and Archaeology.—Professor Penny.

Comparative Anatomy.—Professor Dyche.

Seminary.

Original Compositions in black and white.

Pen Drawing.

Charcoal.—Portraits, heads, and figure studies.

Sketching from Nature and Color.

Physical Training.—Mrs. Clark.

FOURTH YEAR.

Advanced Painting.—Portrait, draped figure, landscape composition, interiors.

History of Fine Arts.—Professor Wilcox.

Aesthetics.—Weekly lecture. Professor Penny.

Physical Training.—Mrs. Clark.

Original composition in color.

Graduating painting and thesis.

Description of the Courses.

CONTRAPUNTAL HARMONY AND COMPOSITION.

The school offers a course of study covering four years. In the first year the work treats of intervals and scales, formation and progression of chords, modulations, suspensions, etc., with practical work in harmonizing chants, chorals, and original melodies, analyzing compositions, and ear drill. The subject of harmony is treated contrapuntally from the beginning. Composition is then taken up—the phrase period, two-part song, three-part song, etc., song with trio, with original work in such forms as the menuett, gavotte, romanza, etude, etc., vocal solos, terzettes for female voices, quartets and choruses. In the fourth year follows the application of simple counterpoint (free) in polyphonic forms—the two- and three-voice invention—choral figuration, fugue and canon. In the Senior year the variation and rondo forms are the subject of composition, then the sonatine and sonata, and finally instrumentation for string quartet, wood wind instruments, ordinary full orchestra, modern full orchestra, vocal solo and chorus with orchestra—overture—cantata.

MUSICAL HISTORY, THEORY, AND LECTURES.

The work in musical theory and analysis includes acoustics, instrumentation, and lectures upon musical art, embracing the gradual development of music from ancient to modern times. Lectures are also given upon the important points in vocal culture and a course upon the history of art.

SEMINARY.

The Seminary is designed especially for students fitting themselves for teachers, although all students of the school are required to attend. The work consists of lectures on the methods of teaching; papers and discussions by students; careful study of the system in use in the school, which aims to combine equally the melodic and harmonic elements of music with the technical, and the examinations of other systems.

DRAWING AND PAINTING.

The basis of all art work is good drawing, and this is insisted upon throughout the course.

The course of study includes systematic and progressive in-

struction in the theory, history and practice of drawing and painting, decorative design, and in those other branches which bear most intimately and directly upon these arts.

Special advantages are offered to those wishing instruction in illustration. The natural scenery of Lawrence is particularly fine for landscape study.

Pupils will have access to the classical museum containing a good collection of antique casts.

ELOCUTION AND PHYSICAL TRAINING.

The course embraces a systematic course of body building and training, to correct physical defects and insure physical control. The best ideas of the Swedish, Delsarte, German and American systems are taught, with gymnasium practice and floor drill. Modern text-books on elocution are discussed, so that the student may become acquainted with all systems. Artificial methods are eradicated, and the best of the true self is developed. Especially valuable to the student of vocal and instrumental music, or of art, has been the work in physical training and elocution.

UNIVERSITY CHORUS.

This chorus is made up of two distinct organizations—the Ladies' Choral Club, and the University Glee Club. As the number of voices forming each club is limited, only the best singers are selected. These form a mixed chorus of about 60 voices, which meets weekly for the study of choral music.

The two clubs meet separately for the study of glees, etc., for male voices, and part songs, etc., for female voices. The Glee Club makes an annual concert tour of the state.

ORATORIO SOCIETY.

This society consists of students and Lawrence singers. It meets weekly for the study of oratorios. The "Messiah," "Creation," "Redemption" and other oratorios have been given. One or two oratorios are given annually.

PUPILS' RECITALS AND ART EXHIBITS.

Recitals are given fortnightly by the students of the school in Music Hall, at which works studied in the class room will be performed before a small audience of fellow-students and their friends. Every student is obliged to attend these recitals and all concerts, and take part in the programs at least twice each year.

There will be two exhibits each year of pupils' work in drawing and painting.

CONCERTS.

Free concerts are frequently given in Music Hall and in University Hall by the professors and advanced students of the school, and by outside talent and professionals. Every student taking seminary work is required to attend these concerts.

LIBRARY.

In addition to the general library facilities of the University, students of the school have access to a choice collection of works on the history of music, vocal and orchestral, scores of operas, symphonies, chamber music, oratorios, and cantatas, bound periodicals, pianoforte and organ music, etc. To this collection additions are constantly being made by purchase, donations, and loans. Students are urged to avail themselves as much as possible of the library facilities of the University, as an aid to intelligent and appreciative work in technical lines.

REQUIREMENTS FOR GRADUATION.

Candidates for the degree must complete the required course of study in the music courses; each must perform in public during the last year of study a concert program, entire or partial, and must present a thesis showing original investigation in some department of musical science or art, or present an original composition, consisting of a sonata for pianoforte, or violin and piano, a quartet for strings, a cantata for solo and chorus with string and organ accompaniment, or a composition for small orchestra.

In the painting courses, the following is the examination given during the last month of the Senior year: Artistic anatomy; artistic perspective; one charcoal head; one painted head; one painted draped figure; one painted interior; one historical composition; one emblematical composition; a thesis showing original investigation in some department of drawing and painting.

EXPENSES.

The fourth year of the courses in music and painting is free for residents of Kansas. The first three years are to be paid for at the following rates:

The year consists of four half terms of nine weeks each—all bills payable quarterly in advance.

First Year—Piano or organ: First term, \$25 per half term, piano with assistant; or \$31, piano with Professor Preyer. Second term, \$27.50 or \$33.50 per half term. Voice, violin, or elocution courses, \$32.50 per half term.

Second Year, \$33.50 per half term.

In the vocal course, piano is required in addition, \$15 per half term.

In the piano course, voice is optional, at the same rate.

These prices include all the theoretical and collegiate studies.

Third Year, \$28.50 per half term (without optionals).

Fourth Year, free to Kansas students.

Graduates of accredited high schools may take their English, German, physical culture, elocution and class work in voice with the regular University classes free. This will make a reduction in

the above rates of \$7.50 per half term the first year, \$5 per half term the second year, and \$2.50 per half term the third year.

Drawing and painting, \$11.25 per half term; three lessons a week, each lesson three hours in length.

Instruction during the first year in pianoforte playing and voice culture is given in hour classes of four students, three lessons weekly.

DEGREES CONFERRED.

Graduates of the courses in piano, organ, violin and voice will receive the degree of bachelor of music; graduates in painting will receive the degree of bachelor of painting.

SPECIAL CATALOGUE.

A special catalogue of the School of Fine Arts will be sent, on application to the Registrar of the University.

The School of Pharmacy.

Faculty.

F. H. SNOW, President.

L. E. SAYRE, Dean,
Pharmacy and Materia Medica.

E. MILLER,
Mathematics.

W. H. CARRUTH,
German.

E. H. S. BAILEY,
Chemistry and Toxicology.

A. G. CANFIELD,
French.

L. I. BLAKE,
Physics.

C. G. DUNLAP,
English.

S. W. WILLISTON,
Physiology.

E. M. HOPKINS,
English.

E. HAWORTH,
Mineralogy.

H. B. NEWSON,
Mathematics.

W. C. STEVENS,
Botany.

E. C. FRANKLIN,
Chemistry.

D. H. HOLMES,
Latin.

H. F. JONES,
Assistant in English.

E. F. ENGEL,
Assistant in German.

EUGENIE GALLOO,
Assistant in French.

A. ST. C. DUNSTAN,
Assistant in Physics.

M. E. RICE,
Assistant in Mathematics.

M. A. BARBER,
Assistant in Botany.

GEORGE WAGNER, Secretary,
Assistant in Pharmacy.

W. M. WHITTEN,
Instructor in Chemistry.

Requirements for Admission.

The candidate must pass an entrance examination in the following studies:

1. Arithmetic, including the Metric System.
2. History of the United States.
3. Geography, Descriptive and Physical.
4. English Grammar and Composition.
5. Constitution of the United States.
6. Physics.

ADMISSION BY CERTIFICATE.

Students will be admitted to this school without examination,

upon presentation of the required certificate, as in the School of Arts. For times and places for application for admission and examination, see page 29.

Course A.—Two Years.

This course embraces two years, extending from the opening of the University in September to its close in June. The college year is divided into two terms, each of which is divided into half terms of nine weeks each. The various studies included in the course are usually carried during the whole term or half term, and, being progressive, it is with extreme difficulty that a student advances in his work satisfactorily unless he enters at the beginning of the University year, in September. The studies in the pharmacy course are those of a very practical character and, as can be seen, largely relate to the applied sciences. They give the student ample preparation for the responsibility connected with the practice of pharmacy and for special work in the lines of analytical chemistry and the examination of foods and medicines.

JUNIOR YEAR.

First Term:

Pharmacognosy (*a*), every day, at 9. Mr. Wagner.

Pharmacy (*b*), every day, at 9. Mr. Wagner.

Physics, Monday, Wednesday, and Friday, at 11; laboratory, Thursday and Friday, 2 to 5. Mr. Dunstan.

General Chemistry: Lectures, Tuesday and Thursday, 10 to 11; laboratory, Monday, Wednesday, and Friday, 10 to 1. Professor Franklin.

Second Term:

Pharmacy, at 9, Monday, Wednesday, and Friday. Mr. Wagner.

Materia Medica, at 9, Tuesday and Thursday. Mr. Wagner.

Latin, at 10, every day. Miss Oliver.

Botany, every day, from 10 to 12. Professor Stevens and Mr. Barber.

Qualitative Analysis (*a*), every day, 2 to 5. Professor Franklin.

Laboratory practice in Pharmacy (*b*), every day, 2 to 5. Mr. Wagner.

SENIOR YEAR.

First Term:

Pharmacy (*a*), every day, at 12. Professor Sayre.

Materia Medica (*b*), every day, at 12. Professor Sayre.

Histological Botany (*a*), 2 to 4, every day. Professor Stevens.

Physiology (*a*), every day, at 4. Professor Williston.

Mineralogy (*b*), every day, at 4. Professor Haworth.

Physiological Chemistry and Urinary Analysis (*b*), 2 to 5, every day. Professor Sayre.

Drug Assay and Pharmaceutical Testing (a). Professor Sayre and Mr. Wagner.

Pharmaceutical Quantitative Analysis (a), 9 to 12. Professor Bailey and Mr. Whitten.

Second Term:

Pharmacy, at 9, Monday, Wednesday, and Friday. Professor Sayre.

Materia Medica, at 9, Tuesday and Thursday. Professor Sayre.

Organic Chemistry: Lectures, Monday, Wednesday, and Friday, at 4; laboratory work, Tuesday and Thursday afternoons. Professor Franklin.

Toxicology (b), at 12. Professor Bailey.

Microscopic Examination of Drugs (a), 2 to 4. Professor Sayre. Preparation of thesis.

The instruction in the studies outlined above consists of lectures, recitations, and laboratory practice. The two subjects, materia medica and pharmacy, continue without interruption through the two college years.

In the study of botany, physics, mineralogy, and other subjects which are common to the various departments of the University, the student recites with the collegiate classes.

PRIVILEGES.

This school is an integral part of the University, and students in pharmacy have all the privileges of the University accorded to regular students, such as admission to the library and to the various collections of zoology, mineralogy, and botany.

REQUIREMENTS FOR GRADUATION.

The degree of Ph. C. (pharmaceutical chemist) will be given to such students as complete the above course, and pass a satisfactory examination upon the same. Experience in the drug business is no longer required for graduation.

Course B.—Four Years.

Beginning with 1896, the Pharmacy department will offer a four-years course, leading to the degree of bachelor of science. The course is outlined as follows:

FIRST YEAR.

First Term:

Chemistry.

Geometry (a).

Algebra (b).

English.

Second Term:

Qualitative Analysis (a).

Botany (b).

Scientific German.
English.

SECOND YEAR.

First Term:

Physics.
Quantitative Analysis.
Scientific French.

Second Term:

Advanced Inorganic Chemistry.
Physics.
Materia Medica (a).
Pharmacy (b).

THIRD YEAR.

First Term:

Pharmacy (a).
Materia Medica (b).
Pharmaceutical Chemistry.
Mineralogy (b).
Assaying (a).

Second Term:

Pharmacy Laboratory.
Organic Chemistry.
Structural Botany.

FOURTH YEAR.

First Term:

Bacteriology (a).
Organic Preparations.
Physiological Chemistry (b).
Physiology.

Second Term:

Therapeutics (b).
Plant Analysis (a).
Microscopic Study of Drugs (a).
Original Research (b).
Thesis.

The same entrance requirements must be fulfilled by students entering this course as by engineering students.

EXAMINATIONS.

At the end of each course, examinations will be held by the Faculty in such manner as may hereafter be prescribed.

FEEES FOR COURSE A.

In the Junior year, the following fees are to be paid in advance by the student:

A pharmacy laboratory fee of \$20, to cover loss, breakage, gas, and use of material in the laboratory. Any balance unexpended at the end of the year is returned to the student.

General chemistry fee, \$12.

Qualitative analysis, \$6.

Any balance unexpended of chemistry fees at the end of each course is returned to the student.

A physical laboratory fee of \$2.

A botanical laboratory fee of \$1.

In the Senior year, the following fees are to be paid in advance by the student:

A pharmacy laboratory fee of \$20, as in the Junior year.

Pharmaceutical quantitative analysis, \$7.

Organic chemistry, \$10.

Any balance unexpended of chemistry fees at end of each course is returned to the student.

A botanical laboratory fee of \$1, to cover the work in structural botany.

A mineralogical laboratory fee of \$1.50.

The yearly fees for course B will be similar in amounts to the above.

No student will be assigned a desk until the necessary fees are paid.

For details of the work of the department, consult its special catalogue, soon to be issued.

The School of Engineering.

Faculty.

F. H. SNOW, President.

F. O. MARVIN, Dean,
Civil Engineering.

E. MILLER,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

E. H. S. BAILEY,
Chemistry.

A. G. CANFIELD,
French.

L. I. BLAKE, Secretary,
Physics and Electrical Engineering.

E. M. HOPKINS,
English.

H. B. NEWSON,
Mathematics.

E. HAWORTH,
Physical Geology.

W. C. STEVENS,
Botany.

E. C. FRANKLIN,
Chemistry.

E. C. MURPHY,
Assistant in Civil Engineering.

F. E. WARD,
Assistant in Electrical Engineering Shops.

H. F. JONES,
Assistant in English.

E. F. ENGEL,
Assistant in German.

EUGENIE GALLOO,
Assistant in French.

A. St. C. DUNSTAN,
Assistant in Physics and Electrical Engineering.

M. E. RICE,
Assistant in Physics.

M. A. BARBER,
Assistant in Botany.

ARNOLD EMCH,
Assistant in Graphics and Civil Engineering.

W. M. WHITTEN,
Instructor in Chemistry.

Admission.

Every person who applies for admission to the Freshman class in the School of Engineering is required to be examined in the various subjects mentioned below, or to present a certificate from high school, academy, or college, as explained under "Admission by Certificate." An applicant may be admitted, although deficient in some of these requirements, provided such deficiency does not exceed three* terms' work; but all deficiencies must be made good within a period determined upon at the time of admission.

Requirements for Admission.

Physical Geography.

General History.—Myers, Sheldon, Barnes, or Fisher.

*A "term's work" signifies one study pursued daily for a period of half a year.

Civil Government.—Thorpe & Hodder's Civil Government of the United States and of Kansas, or equivalent.

Algebra.—Through simple and quadratic equations.

Geometry.—Plane and solid.

Physics.—Appleton's School Physics; Gage's Elements of Physics.

English.—One year. See p. 22.

French.—One year.* See p. 24.

German.—One year.* See p. 25.

For admission by certificate, see p. 25.

Special Students.—It is designed to give every opportunity for study and research to persons not enrolled as regular students, who wish and are prepared for special practical work in the lines of engineering offered by this school. Courses will be arranged for such individually, as their experience and training have qualified them.

The admission of such students and the general oversight of their work is under the control of a committee of the Engineering Faculty. All special students are subject to the same regulations as other students, except as to the number of studies taken at one time.

Facilities.

The school is well equipped with apparatus of modern pattern, and from the best makers. The field instruments comprise transits, levels, compasses, solar attachments, rods, chains, tapes, plane tables, heliotropes, current meter, aneroids, and other minor instruments. Among the above are a precise level for very accurate leveling, a secondary triangulation transit for topographical work, and an alt-azimuth instrument for use on primary triangulations, and which has a 10-inch circle, read to single seconds of arc. These three instruments are from Fauth & Co., of Washington, D. C.

A 2,000-pound cement testing machine, with its accompanying appliances, affords an opportunity for the student to compare the different cements found on the market.

The testing laboratory contains an Olsen 100,000-pound testing machine, with the means of making tensile, compressive, transverse, torsional, and shearing tests. The machine is accompanied by extensometers and compression micrometers. There are also machine saws and polishing wheels for the preparation of test samples of stone, brick, etc.

The draughting rooms are provided with convenient tables, are well lighted, and furnished with a large line of photographs and blue prints of actual constructions.

* Students having credit for three years of Latin, as outlined on p. 25, may be excused from either the French or German required in the engineering courses.

Excellent facilities for practical work in general physics, chemistry, botany and electrical engineering are provided in the very completely equipped laboratories of the University.

The engine house contains a battery of three low-pressure boilers, used for heating the University buildings, and also three high-pressure boilers, used for power for the shops and various dynamos. This building contains, also, a machine shop, accommodating about 50 students, and adapted to a comprehensive and practical training in machine work.

The engine room contains a Russell four-valve medium-speed engine of 150 horse-power, fitted with reducing gear and indicator connections, and also a 35 horse-power Armington & Sims high-speed engine, also fitted with indicator connections. Adjoining the engine house is a forge house, equipped with forges, power blast, and a full assortment of blacksmith tools.

In the machine shop are a dozen large vises, with bench tools, and sufficient forge and carpenter tools, for students' use. There are, among other machines, six screw-cutting engine lathes, 16-inch swing and 6-foot bed; a Lodge & Davis standard engine lathe, 18-inch swing and 10-foot bed; a Gray 26-inch by 6-foot iron planer; a Prentice 25-inch swing upright drill; a Brainard universal milling machine, with 39-inch table and 18-inch vertical range; a Lodge & Davis upright drill, and a shaper, 18-inch swing.

In the dynamo room are several complete electric plants, used primarily for experimental and testing purposes, but also providing light and power for the University buildings. These are running every working day, and under charge of a skilled engineer. There is a 500-light Westinghouse alternator; a 750-light Fort Wayne Wood alternator, each with separate exciters; an American arc; a Western 20 K. W. compound-wound multipolar generator; a 4, 5 K. W. General Electric standard 4-pole generator; a three horse-power Eddy bipolar motor. Each plant has its own switch board and station instruments, and a dozen circuits allow the different currents to be delivered to the various laboratories and lecture rooms in the other University buildings.

Each electrical student in some portion of his course spends one week in both boiler and engine room. In connection with the commercial uses of these electric plants, students are at work upon practical problems, such as characteristic curves, efficiency, etc., duty tests of the boilers, use of indicator cards, and power tests. Occasional visits may also be made to neighboring cities for the inspection and testing of plants.

The work of the chemistry department is done in the chemistry building, where there are three laboratories, a lecture room, balance room, store room, etc., and in five rooms in the basement of the main building. There is a good supply of apparatus and

material for illustration. The students are given the advantage of the use of chemical and glassware that is imported duty free. Belonging to this department are assay furnaces for the analysis of ores of gold and silver; combustion furnaces for organic analysis; a saccharimeter for sugar determinations; apparatus for the determination of vapor density; apparatus for gas analysis, for water analysis, for electrolytic analysis, and the usual supplies for advanced analytical work.

The technological portion of the University library contains about 2,000 volumes, while in the reading room are found the leading American and foreign engineering journals.

Courses of Instruction.

The School of Engineering at present offers four courses of instruction, as follows, viz.: The course in Civil Engineering, the course in Electrical Engineering, the course in Hydraulic and Sanitary Engineering, and the course in Chemical Engineering. All of these courses lead to the degree of *bachelor of science*.

All students of the school pursue the subject of pure mathematics through the calculus, which is followed by thorough courses in analytical mechanics and resistance of materials, including work in the testing laboratory in determining the physical properties of iron, steel, wood, and other structural materials.

In general physics there are given five lectures a week for a year, accompanied by weekly laboratory practice on the part of the students. Enough of French and German is given to furnish an ability to read scientific literature in these languages. The use of English is taught in both the Freshman and Senior years by regular class drill, while exercises in composition are required throughout the course. Full laboratory courses in chemistry are required of all students. Descriptive geometry, including shades and shadows, is taught by class recitations, and accompanied and followed by work in the draughting room on practical problems.

The above are the main subjects pursued in common by all students of this school.

The civil engineers add to their previous study of mechanics the subject of the mechanics of fluids, following the latter with applications to hydraulic engineering, in water supply, sewerage, hydraulic motors, irrigation, etc. The calculations of strains in structures, and the design and proportioning of the details of roofs and bridges, is carried throughout an entire year. The work in surveying includes land surveying, mining surveys, city surveys, topography, hydrography, elementary geodesy, precise leveling, and the construction of maps and plats, and the use of various instruments on practical work in the field.

All students in civil and hydraulic engineering go into camp

for four weeks during the summer vacation. In 1895 the camp was located near Lawrence, and a complete topographic survey of three sections of land was made, affording practice in base measurement, triangulation, leveling, stadia work, and field sketching. The results of the survey were embodied in contour maps made in camp, and finished plats were worked up later in the fall term. One party also gave considerable time to a line of precise levels, while all students in camp participated in a short railroad survey.

The classes in railway engineering are made familiar with the field work of preliminary survey, location and construction of railway lines by both class work and surveys in the field. In connection with the use of instruments, considerable attention is given to the causes of errors, their relative values, and the means to be employed to keep the errors within limits. Municipal engineering is given under the heads of water supply, sanitary engineering, roads and pavements, etc. Under the head of masonry are considered the subjects of foundations, the handling and preparing of stone, cement, concrete, and the construction of piers and arches. Throughout the first three years of the civil engineer's course, two or three afternoons in each week are spent in the draughting rooms on exercises connected with class work, and on drawings designed to give practice in topographic drawing, with both pen and brush, in lettering, in the construction of titles, in the preparation of working drawings, in tracing, and blue printing. Habits of neatness, accuracy and dispatch are insisted upon.

The electrical engineers, in addition to the courses taken in common with other students of the school, as mentioned above, take advanced work in the physical laboratory, courses in thermodynamics, with practice with the steam-engine indicator, the theory of machine construction, together with practical work in the construction of machines. The work of the electrical-engineering student in the draughting room is directed largely to the making of working drawings of machinery. Practice in the machine shop connected with the department of physics, and under the direction of skilled mechanics of the department, forms a part of the instruction. This practice includes vise, bench and forge work, and such general work with the machine lathe, planer, upright drill, milling machine, etc., as will enable the student to work in metals, to make small tools, as taps, dies, reamers, etc. A system of progressive machine work is required of each student throughout his course, and designed to develop manual skill and familiarity with the best general machine-shop practice.

Students who follow the hydraulic course give special attention in the last two years to sanitary engineering, including sewerage, the disposal of sewage and garbage; to water supply, with reference to the construction of works, the selection and

character of the supply and the means of its improvement; to irrigation, including rainfall, evaporation, absorption, run-off and flow of streams, water ways, reservoirs, canals, pumping machinery, the duty of water and methods of application to land; to economic geology, bacteriology, and the chemical analysis of water and soils. They also give some time to practical hydraulic work in the field.

In the course in chemical engineering, in addition to the work taken in common with the other students of this school, in the Junior year the students begin quantitative analysis, which is to a large extent the foundation of the chemical course, and involves the accurate determination of the composition of various substances, both organic and inorganic. This is followed by the course in the manufacture and purification of chemicals, especially those of an inorganic character, and at the same time work is begun in organic chemistry, which includes both lectures and recitations, and a complete elementary course in the laboratory. It is an essential preparation for the work of the Senior year. In the last year the student devotes more special attention to chemistry. Here he has an opportunity to specialize to a greater extent than in previous years, as several optionals are offered. The practical side of the work is not overlooked, and on this account such subjects as metallurgy, assaying, chemical technology and sanitary and applied chemistry are included.

Degrees.

All courses in the School of Engineering lead to the degree of bachelor of science.

All work for higher degrees is under the supervision of a committee of the University Council. No second degree will be given earlier than one year after the bachelor's degree has been conferred.

Candidates for the degree of master of science must be graduates in engineering of this University, or of some engineering college of equal rank, and must pursue in residence a course of study for at least one year, equivalent to six full terms' work. From one- to two-thirds of their work must be in engineering and one-third in science other than engineering. A scientific thesis is also required.

Graduates in engineering of this University, and masters of science who have received their degree through the engineering Faculty, are eligible to the professional degrees of civil engineer, electrical engineer, or analytical chemist, whichever is appropriate to the undergraduate course taken. Candidates for these degrees must have spent at least three years' actual time in professional practice, in positions of responsibility, in the design, construction or operation of engineering works, and must furnish

detailed and satisfactory evidence as to the nature and extent of this practice.

They must submit an engineering thesis, accompanied by detailed explanations, drawings, specifications, estimates, etc., and embodying the results of their own work or observation. If approved, the thesis and all accompanying material shall be the property of the University.

All theses for any degree must be delivered to the Dean of the School of Engineering on or before the 15th day of May.

Course in Civil Engineering.

FRESHMAN YEAR.

First Term:

Scientific French.—Every day, at 11. Miss Galloo.

Algebra.—Every day, at 10. Professor Miller, Professor Newson, and Mr. Rice.

English (B.I.)—Every day, at 8 or 11. Mr. Jones and assistant.

Draughting.—Monday, Wednesday, and Friday, 2 to 4. Mr. Emch.

Second Term:

Trigonometry.—(a). Every day, at 8 or 10. Professor Miller, Professor Newson, and Mr. Rice.

Chemistry (b).—Every day, at 11. Professor Bailey.

Scientific German.—Every day, at 9. Mr. Engel.

Descriptive Geometry.—Every day, at 12. Mr. Emch.

Draughting.—Tuesday and Thursday, 2 to 4. Mr. Emch.

Four-weeks summer course in field practice.

Three themes.

SOPHOMORE YEAR.

First Term:

Physics.—Every day, at 12. Professor Blake.

Chemistry.—Every day, 10 to 12. Professor Bailey and Mr. Whitten.

Analytical Geometry.—Every day, at 8. Professor Newson.

Draughting.—Monday, Wednesday, and Friday, 2 to 4. Mr. Emch.

Three themes.

Second Term:

Calculus.—Every day, at 8. Professor Newson.

Physics.—Every day, at 12. Professor Blake.

Surveying.—Every day, at 11. Professor Marvin and Mr. Emch.

Draughting.—Tuesday and Thursday, 2 to 4. Mr. Emch.

Four-weeks summer course in field practice.

Three themes.

JUNIOR YEAR.

First Term:

Elements of Mineralogy and Petrography.—Every day, at 9. Professor Haworth.

Analytical Mechanics.—Every day, at 11. Mr. Murphy.
Field Engineering.—Every day, at 12. Professor Marvin and Mr. Emch.

Draughting.—Monday and Wednesday, 2 to 4. Mr. Emch.
Two forensics, or equivalent theses.

Second Term:

Practical Astronomy.—Every day, at 11. Professor Miller.
Resistance of Materials.—Every day, at 10. Mr. Murphy.
Location of Railroads.—Three-fifths term (a). Every day, at 9. Professor Marvin.
Roads and Pavements.—Two-fifths term (b). Every day, at 9. Mr. Murphy.
Testing Laboratory Work.—One afternoon per week. Professor Marvin and Mr. Murphy.
Draughting.—Tuesday and Thursday, 2 to 4. Mr. Murphy.
Four-weeks summer course in field practice.*
Two forensics, or equivalent theses.

SENIOR YEAR.

First Term:

Mechanics of Fluids (a).—Every day, at 10. Mr. Murphy.
Hydraulic Motors (b).—Every day, at 10. Mr. Murphy.
Roofs and Bridges.—Every day, 2 to 4. Professor Marvin.
Masonry (b).—Every day, at 9. Mr. Murphy.
Sanitary Engineering (a).—Every day, at 11. Professor Marvin.
Testing Laboratory Work.—Mr. Murphy.
Two forensics, or equivalent theses.

Second Term:

Advanced English Composition.—Monday, Wednesday, and Friday, at 9. Professor Hopkins and Mr. Jones.
Water Supply (a).—Every day, at 11. Mr. Murphy.
Specifications and Contracts (b).—Every day, at 10. Professor Marvin.
Engineering Design.—Every day, 2 to 4. Professor Marvin.
Professional thesis.

Course in Electrical Engineering.

FRESHMAN YEAR.

First Term:

Algebra.—Every day, at 8 and 10. Professor Miller, Professor Newson, and Mr. Rice.
English (B.I).—Every day, at 8 and 11. Mr. Jones and assistant.
Scientific French.—Every day, at 11. Miss Galloo.

*For present members of the Junior class, this work is optional.

Draughting.—Three afternoons per week, Monday, Tuesday, Wednesday, or Friday, 2 to 4. Mr. Emch.

Shop practice, one-half day per week.

Second Term:

Trigonometry (a).—Every day, at 8 and 10. Professor Miller, Professor Newson, and Mr. Rice.

General Chemistry (b).—Every day, at 11. Professor Bailey.

Descriptive Geometry.—Every day, at 12. Mr. Emch.

Scientific German.—Every day, at 9. Mr. Engel.

Draughting.—Tuesday and Thursday, 2 to 4. Mr. Emch.

Shop practice, one-half day per week.

Three themes.

SOPHOMORE YEAR.

First Term:

Physics (Mechanics, Sound, and Static Electricity).—Lectures every day, at 12, and laboratory practice one afternoon per week, from 2 to 5. Professor Blake, Mr. Dunstan, and Mr. Rice.

Analytical Geometry.—Every day, at 8. Professor Newson.

Chemistry.—Every day, 10 to 12. Professor Bailey and Mr. Whitten.

Draughting.—Two afternoons per week; Monday, Tuesday, Wednesday, or Friday, 2 to 4. Mr. Emch.

Shop practice, one-half day a week.

Three themes.

Second Term:

Calculus.—Every day, at 8. Professor Newson.

Physics (Electricity and Magnetism, Heat and Light).—Lectures every day, at 12, and laboratory practice one afternoon per week, from 2 to 5. Professor Blake, Mr. Dunstan, and Mr. Rice.

Electrical Measurements.—Every day, at 11. Mr. Dunstan.

Draughting.—Tuesday and Thursday, 2 to 4. Mr. Emch.

Shop practice, one-half day a week.

Three themes.

JUNIOR YEAR.

First Term:

Analytical Mechanics.—Every day, at 11. Mr. Murphy.

Mathematical Theory of Electricity and Magnetism, with special reference to the principles involved in accurate measurements of resistances, capacities and induction coefficients. Every day, at 9. Mr. Rice.

Differential Equations.—Monday, Wednesday, and Friday, at 12. Professor Newson.

Laboratory practice two afternoons per week.—Mr. Rice. Accurate measurements of resistances, electro-motive force, determination of instrument constants and magnetization

curves. During the term, each student will be required to design and construct some delicate electrical measuring instrument.

Two forensics, or equivalent theses.

Shop practice, one-half day per week.

Electrical Seminary.—Once a week.

Second Term:

Resistance of Materials, with work in testing laboratory.—
Every day, at 10. Mr. Murphy.

Dynamo-Electric Machinery. Fundamental Types of Generators and Motors.—Every day, at 11. Professor Blake.

Theory of Alternating Currents.—This course treats of the general equations for current in circuits containing resistance, self-induction and capacity, and the effects of variation of constants. It is intended to develop the mathematical treatment of the subject. Every day, at 9. Mr. Rice.

Laboratory work two afternoons per week.—Measurement of electrolytic and insulation resistances, capacities, and inductances. Design and construction of some minor laboratory instruments. Mr. Rice.

Two forensics, or equivalent theses.

Shop practice, one-half day per week.

Electrical Seminary.—Once a week.

SENIOR YEAR.

First Term:

Thermodynamics, including theory of and practice with the steam-engine indicator; steam engines and boilers, with several practical tests in efficiency and duty. Every day, at 11. Professor Blake.

Alternating Current Machinery.—This course takes up in detail the design and construction of alternators, transformers, and alternating current motors. Special attention is given to the subject of power transmission by polyphasal currents. Every day, at 10. Mr. Dunstan.

Laboratory work.—Efficiency tests and characteristic curves of direct current generators and motors. Two afternoons per week. Mr. Dunstan.

Chemistry of the Metals (*a*).—Every day, at 2. Professor Bailey and Professor Franklin.

Chemical Physics (*b*).—Every day, at 11. Professor Franklin.

Machine practice in construction of several types dynamos, transformers, and of other commercial electrical appliances.

Two afternoons per week.

One week in fire room and one week in engine room are required of each student for practice in the proper care and handling of boilers and engines.

Two forensics, or equivalent theses.

Electrical Seminary.—Once a week.

Second Term:

Specifications and Contracts.—Every day, at 10, during the second half term. Professor Marvin.

Alternating Current Machinery (continued).—Every day. Mr. Dunstan.

Advanced English Composition.—Monday, Wednesday, and Friday, at 9. Professor Hopkins and Mr. Jones.

Lectures upon the application of electricity to special purposes, together with appropriate laboratory and shop practice. 6 hours per week. Professor Blake and Mr. Dunstan.

Electrical Seminary.—Once a week.

Preparation of thesis based upon student's own work.

During the term, special instruction is given at various opportunities in the designing and setting up of machinery, by Mr. Ward, superintendent electrical-engineering shops.

Course in Hydraulic and Sanitary Engineering.

FRESHMAN AND SOPHOMORE YEARS.

Same as the course in civil engineering.

JUNIOR YEAR.

First Term:

Same as the course in civil engineering.

Second Term:

Resistance of Materials.—Every day, at 10. Mr. Murphy.

Economic Geology (a).—Every day, at 2. Professor Haworth.

Bacteriology (b).—Every day. Professor Stevens.

Water and Soil Analysis.—Every day, 3 to 5. Professor Bailey.

Testing Laboratory.—One afternoon per week. Professor Marvin and Mr. Murphy.

Draughting.—Tuesday and Thursday, 2 to 4. Mr. Emch.

Two forensics, or equivalent theses.

Four-weeks summer course in field practice.

SENIOR YEAR.

First Term:

Mechanics of Fluids (a).—Every day, at 10. Mr. Murphy.

Hydraulic Motors (b).—Every day, at 10. Mr. Murphy.

Sanitary Engineering.—Every day, at 11. Professor Marvin.

Masonry (b).—Every day, at 9. Mr. Murphy.

Hydraulic Field Work (a). Mr. Murphy.

Testing Laboratory.—One afternoon per week. Mr. Murphy.

Two forensics, or equivalent theses.

Second Term:

Advanced English Composition.—Monday, Wednesday, and Friday, at 9. Professor Hopkins and Mr. Jones.

Water Supply (a).—Every day, at 11. Mr. Murphy.

Specifications and Contracts (b).—Every day, at 10. Professor Marvin.

Irrigation Engineering.—Every day, at 12. Mr. Murphy.
Professional thesis.

Course in Chemical Engineering.

In the Freshman year the course is the same as the civil engineering, except that summer field practice is not required of the chemical engineers.

SOPHOMORE YEAR.

First Term:

Analytical Geometry.—Every day, at 8. Professor Newson.

Physics.—Every day, at 12. Laboratory practice one afternoon per week. Professor Blake.

Qualitative Analysis.—Every day, from 10 to 12. Professor Bailey and Mr. Whitten.

Three themes.

Second Term:

Botany.—Every day, from 10 to 12. Professor Stevens and Mr. Barber.

Physics.—Every day, at 12. Laboratory practice one afternoon per week. Professor Blake.

Calculus.—Every day, at 8. Professor Newson.

Three themes.

JUNIOR YEAR.

First Term:

Quantitative Analysis.—Every day, from 2 to 5. Professor Bailey.

Mineralogy and Petrography.—Every day, from 9 to 11. Professor Haworth.

Analytical Mechanics.—Every day, at 11. Mr. Murphy.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

Second Term:

Economic Geology (a).—Every day, at 2. Professor Haworth.

Inorganic Preparations (b).—Every day, from 11 to 1. Professor Bailey.

Organic Chemistry.—Monday, Wednesday, and Friday, at 4. with laboratory practice on Tuesday and Thursday afternoons. Professor Franklin and Mr. Whitten.

Resistance of Materials.—Every day, at 10. Mr. Murphy.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

SENIOR YEAR.

First Term:

Metallurgy (a).—Every day, at 11. Professor Bailey.

Chemical Technology (*b*).—Every day, at 11. Professor Bailey.
Sanitary and Applied Chemistry.—At the convenience of the instructor and student. Professor Bailey.

Optionals: Either sugar analysis, gas analysis, iron and steel analysis, or organic preparations. Every afternoon. Professors Bailey and Franklin.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

Second Term:

Advanced English Composition.—Every day, at 9. Professor Hopkins and Mr. Jones.

Analysis of Soils, Fertilizers, Waters, and Foods.—Every afternoon. Professor Bailey.

Assaying (*a*).—Every day, from 10 to 12. Professor Franklin.
Preparation of thesis (*b*).

Chemical Seminary.—Every Thursday, at 4.

University Extension.

The University of Kansas recognizes University Extension work as an appropriate part of its services. The importance and success of University Extension has been proven by repeated experiments in England and America. Such institutions as Johns Hopkins, Yale, the University of Pennsylvania, the University of Indiana, the University of Wisconsin and the Chicago University make University Extension a part of their regular work.

University Extension is simply university teaching carried on outside of the University. Its purpose is to give instruction to those who have been denied the privileges of regular university training, and to enable those who have begun university courses to continue them under the direction of university instructors. In short, University Extension is for the express benefit of those who are unable to attend the University.

The instructors of the University have been in the habit of giving, from time to time, when asked by the public, single lectures in different parts of the state. University extension groups these single lectures about a special topic, and aims to give organic instruction upon it. It will thus be seen that the work is in accordance with the spirit and practice of the University of Kansas.

The work was inaugurated in October, 1891. Forty-five courses have thus far been given, in Atchison, Topeka, Olathe, Wichita, Iola, Leavenworth, Kansas City, Kas., Lawrence, Kansas City, Mo., Paola, Independence, and Fort Scott. In the courses given, in the academic year 1894-'95, fully 1,000 citizen students were enrolled, of whom upwards of 300 were entered for examination at the end of the 12 weeks' study.

The following 34 courses of University Extension lectures are offered by the University of Kansas to communities desiring them. The lectures are prepared with a view to continuous study of a given subject, and for solid instruction rather than entertainment alone. They include readings, conferences, and examinations, and are open to all persons who form themselves into a class. At the close of every course an examination is given to the members of the class who may desire it.

Persons who hold the degree of bachelor of arts from the University of Kansas, or from other institutions of equal rank with it, may receive the degree of master of arts upon the satisfactory completion of nine University Extension courses of 12 lectures

each. The extension lecturers shall register the courses of candidates for the second degree with the Committee on Graduate Studies, and report to it the result of all examinations. These courses shall be accompanied by such study, reading and examination as shall be prescribed by the professors in charge.

Persons not holding the bachelor's degree may receive a University Extension diploma upon the satisfactory completion of nine University Extension courses of 12 lectures each.

Work done under instructors from other institutions than the University of Kansas will be accepted upon examination for not more than four of the nine courses necessary for a degree or a diploma. This work will also be accepted as undergraduate work, a full course in University Extension being reckoned as a two-thirds term in the University. Nine 12-lecture courses will be accepted as equivalent to one full year's work at the University.

No credit for University Extension courses will be given to students taking work in the University.

The records of all work done under the direction of the University of Kansas will be kept on file at the University.

Not more than one lecture per week will be given in any one of the following courses.

Literary and scientific clubs and associations and reading circles desiring to avail themselves of University Extension lectures ought to form a local association and organize a class, fixing the tuition at a rate sufficient to cover expenses.

The courses offered are as follows:

Studies in Shakspeare. By C. G. Dunlap, Litt. D.

English Literature of the Nineteenth Century. By C. G. Dunlap, Litt. D.

Political Economy. By F. W. Blackmar, Ph. D.

Money and Monetary Theories. By F. W. Blackmar, Ph. D.

Taxation and Public Finances. By F. W. Blackmar, Ph. D.

The Chemistry of Everyday Life. By E. H. S. Bailey, Ph. D.

Electricity and its Modern Applications. By L. I. Blake, Ph. D.

Heat, Light, and Sound, and their Practical Applications. By L. I. Blake, Ph. D.

German Literature (first classic period). By W. H. Carruth, Ph. D.

German Literature (second classic period). By W. H. Carruth, Ph. D.

German Literature (Faust). By W. H. Carruth, Ph. D.

Astronomy. By E. Miller, A. M.

Geology. By E. Haworth, Ph. D.

The Romantic School in France. By A. G. Canfield, A. M.

Development of the Novel in France. By A. G. Canfield, A. M.

Classical Greek Literature for English Readers. By A. M. Wilcox, Ph. D.

Greek Architecture and Sculpture. By A. M. Wilcox, Ph. D.

- The Latin Poets. By D. H. Holmes, Ph. D.
How Language Grows. By D. H. Holmes, Ph. D.
History of Music. By G. B. Penny, B. S.
Voice Training and the Art of Singing. By G. B. Penny, B. S.
Medical Chemistry and Sanitary Science. By L. E. Sayre, Ph. G.
Physiological Chemistry. By L. E. Sayre, Ph. G.
Ethics. By Olin Templin, A. M.
Psychology. By Olin Templin, A. M.
American History. By F. H. Hodder, Ph. M.
Government of the United States. By F. H. Hodder, Ph. M.
Municipal Government. By F. H. Hodder, Ph. M.
International Law. By F. H. Hodder, Ph. M.
Roads, Streets, and Pavements. By E. C. Murphy, C. E.
American Literature. By E. M. Hopkins, Ph. D.
The German Empire. By E. D. Adams, Ph. D.
Evolution. By F. H. Snow, Ph. D., LL. D.
History of Education. By A. S. Olin, M. A.
Drawing. By A. H. Clark.

Miscellaneous Information.

STUDIES.

Unless otherwise prescribed, the regular work of any student shall consist of three full studies. More or less than this amount may be taken only by permission of the Faculty.

DEPARTMENT OF PEDAGOGY.

This new department of University work is now fully organized, and offers nine courses in the science and art of teaching. Aside from its general-culture value, the work of the department is intended to better prepare for their chosen profession the large number of students who take up the work of teaching immediately after graduation. Among the studies offered are the so-called professional branches, history of education, philosophy of education, school law, methods, and school management.

Chapter 132 of the Session Laws of 1893 provides that, by examination in the above-named professional subjects, University graduates may secure the state certificate, which, after three years' successful experience in teaching, becomes a life diploma, valid in all public schools of whatever grade in the state of Kansas.

Aside from the worthy recognition which is thus given to University graduates who wish to engage in educational work, there is the practical advantage which comes from intelligent investigation and discussion of educational questions, scientifically treated by the highest authorities. Students desiring to teach are especially recommended to avail themselves of this opportunity to do collegiate work, and at the same time prepare specifically for their future vocation.

THE UNIVERSITY GEOLOGICAL SURVEY.

By enactment of the Board of Regents, March 28, 1895, and in accordance with the state law under which the University is now being administered, the University Geological Survey of Kansas was formally organized, with the Chancellor ex officio director; Prof. S. W. Williston, paleontologist; Prof. Erasmus Haworth, geologist, and Prof. E. H. S. Bailey, chemist.

It is proposed to conduct a systematic geological survey of the state, including investigations along all lines of research which a liberal interpretation of the law will permit. Advanced students will find this a most helpful means of obtaining prac-

tical training in all branches of geology. Already considerable work has been accomplished, the report upon which will soon appear as volume I of the survey.

ENGLISH LITERATURE PRIZE.

Through the generosity of Mr. Arthur B. Barteaux, of New York city, a prize of \$20 in books (four volumes, royal octavo, Green's "Short History of the English People," illustrated by Mrs. John R. Green and Miss Kate Norgate, uncut edges and gilt tops, \$5 a volume), will be awarded to that member of the Junior or Senior class who shall present the best characterization of an English author of the Victorian period in any department of letters—literary, philosophical, or scientific. The essay must be at least 2,000 words in length, must be typewritten, and must be submitted to the Department of English not later than May 1, 1896. The judges are to be Chancellor F. H. Snow, Mr. B. W. Woodward, and Col. H. L. Moore.

PHYSICAL TRAINING.

The University is glad to announce that provision has been made to afford all students an opportunity for physical training. Instructors have been secured, a large room, with baths adjoining, is fitted up with the necessary lockers and apparatus, and regular classes in physical culture have been established, the woman's class under the charge of a woman instructor. Attendance on these classes is optional with Seniors and Juniors, required of Sophomores and Freshmen; each class meeting three times a week. Special attention will be paid to the individual needs of each student, and to each will be assigned such forms of exercise as seem best suited to promote health and proper physical development. In addition to the indoor work required, facilities for additional training are provided for those who desire it, or who may wish to compete for membership in University athletic teams; and such membership is open to all students who maintain a satisfactory standing in their studies.

DISCIPLINE.

That the generosity of the state may not be abused, and that perfect justice may be done all who are earnestly striving to make the best possible use of the opportunities offered, there is but a single requirement: Unexceptional deportment and strict attention to University duties.

EXAMINATIONS.

Examinations, oral and written, are held as frequently as the judgment of the instructor commends, at least at the close of the work in each subject.

Absence from examination or failure in more than one-third of his work, in any one term, severs a student's connection with the University.

RECORD OF STANDING.

At the close of each term, a summary of the students' work is reported to the Registrar, for entry upon the general record. At the end of each half year, the parent or guardian of each student, or the student, if requesting it, is furnished with a copy of the entries relating to that student.

DEVOTIONAL EXERCISES.

Devotional exercises are held in University Hall every morning. All students are cordially invited to attend these exercises.

DEGREES CONFERRED ON GRADUATION.

Any student, on completing the work assigned for the Freshman, Sophomore, Junior and Senior years in the School of Arts, will receive the degree of bachelor of arts; on completing any of the courses in the School of Engineering, the degree of bachelor of science; graduates from the Law School will receive the degree of bachelor of laws; from the School of Pharmacy, the degree of pharmaceutical chemist (Ph. C.); and those from the School of Music, the degree of bachelor of music, (Mus. B.).

HIGHER DEGREES.

The degree of doctor of philosophy will be granted on the ground of advanced scholarship and the performance of independent work in some special line. It will not be given for scholarship alone, or for the completion of a prescribed course of study.

1. The candidate must be a baccalaureate graduate of this University or of a college or university whose degrees are accepted by this University as equivalent to its own, or he must give satisfactory evidence to the University Council that he possesses an equivalent preparation for graduate studies.

2. He must make application to the Committee on Graduate Studies before the 1st of October preceding the commencement at which he intends to present himself for the degree, and must then give satisfactory evidence of his ability to read with fluency such German and French as may be necessary for a proper prosecution of his studies.

3. He must have spent at least three college years in graduate studies, two of which must be at this or some approved university; the last year must be spent at this University.

4. He must present a thesis, showing the results of original research, and must pass acceptable examinations, both written and oral (the latter before the University Council), in one chief or major study, and two allied, subsidiary or minor studies, which studies must be in at least two departments. He may take minors in subjects not mentioned in the list of majors offered. One hundred and fifty printed copies of his thesis must be deposited with the University librarian before the degree is conferred.

5. The lines in which the degree of Ph. D. is offered in this University are as follows:

Greek.

Latin.

French.

German.

English.

Political Economy, Sociology, American and European History.

Entomology.

Paleontology.

Mineralogy, Stratigraphical and Physical Geology.

Mathematics.

Philosophy.

The master's degree will be conferred upon graduates of this University, or of other institutions of a similar grade, on the fulfillment of either of the two sets of conditions given below.

The general direction of candidates for the master's degree is intrusted to a Committee on Graduate Studies. All candidates for this degree will enroll with this committee, which will see that their courses are chosen so as to conform to the regulations governing graduate work, receive reports of work done, arrange for examinations, and have general superintendence of their work. The committee will report to the Faculty for recommendation for the degree those candidates who have satisfactorily completed the work and presented a creditable thesis.

Graduates of the University of Kansas, or other institutions of similar rank, may obtain the master's degree by one full year in residence. They may choose as part or all of their work, subject to regulations of the Faculty, special work for which they are fitted, special graduate courses offered by the University, or the courses offered in the regular list of optional studies. In the latter case, they are enrolled in the regular classes and are subject to the general regulations governing undergraduate students.

Graduates of the University of Kansas may obtain the master's degree without actual residence at the University, by devoting an amount of time equal to that demanded by the work of a full academic year to a course of study chosen under the direction of the heads of the departments in which such is offered, and in accordance with the published rules of the Committee on Graduate Studies.

Students will not be accepted as candidates for the second degree who at the previous commencement have lacked more than two full courses of the amount required for the bachelor's degree.

The Faculty strongly discourages students from attempting to take both bachelor's and master's degrees at the same commencement.

The student must conform to the regulations of the Committee

on Graduate Studies. A copy of these regulations will be sent on application to the Registrar.

Graduates from the course in civil engineering in this University, or from similar courses of equivalent grade in other schools, may become candidates for the degree of civil engineer. Such applicants are required to spend one year at the University, taking such advanced work in engineering and its allied branches as may be arranged for with the professor of civil engineering. The work must be as far as practicable in the line of original investigation; and, if desired, it may be divided between two years.

NON-ACADEMIC WORK.

Believing that the strength and value of the University is measured by its service to the state at large, and wishing to reach as many of our citizens as possible in a helpful and stimulating way, the University authorities cordially invite all who desire to pursue special or general courses of reading and investigation to connect themselves with the University, or to correspond with those in charge of such studies. Suggestions as to authorities, arrangement of topics, prices of books, etc., will be gladly given. Those pursuing this special work at the University will have the advantage of daily recitations, lectures, library, laboratories, etc.

All who are seeking special information or self-culture, and the highest line of citizen life and influence, should feel that, by the generosity of the state, advice and information are freely placed at their command. Personal supervision, by correspondence, will be cheerfully given to the work of reading clubs or associations for study; and an occasional visit from some member of the Faculty can be secured, when desired by such associations, on application.

LECTURES OFFERED TO KANSAS COMMUNITIES.

In order that as many people of the state as possible may receive some immediate benefit from the University as an institution established for the dissemination of learning, a large number of lectures are offered to Kansas communities by the Faculty of the University. For these lectures no charges are made beyond the expenses of the lecturers, when the lectures are made free to the public. These lectures are suitable for delivery under the auspices of high schools, educational, literary or religious societies. The list of lectures thus offered for the academic year 1896-'97 comprises 81 different subjects, and includes the names of 23 members of the University Faculty. All correspondence regarding these lectures should be addressed to the Chancellor of the University.

THE KANSAS UNIVERSITY QUARTERLY.

The "Kansas University Quarterly" is maintained by the University as the medium for the publication of the results of original

research by members of the University. Papers are published in it only on recommendation of the committee of publication, which committee is composed of six professors and the managing editor. The "Quarterly" is issued regularly, as indicated by its title; No. 1, Vol. I, is dated July, 1892. Each number contains 50 or more pages of reading matter, with necessary illustrations, the four numbers of each year constituting a volume. The price of subscription is \$2 a volume, single numbers varying in price with cost of publication. Exchanges with similar publications of other colleges or universities and of learned societies are solicited. All communications regarding the "Quarterly" should be addressed to W. H. Carruth, managing editor, Lawrence.

PAPERS.

The weekly papers heretofore existing have been consolidated into one paper, "The University Weekly." The students of the School of Law publish the "Kansas University Lawyer," a paper devoted to the interests of that school.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

The Young Men's Christian Association is an organization composed of active Christian men of the school, banded together for the purpose of preserving and advancing the spiritual interests of the University. A gospel meeting is held every Sunday afternoon in Music Hall, at 3 o'clock, and a daily prayer meeting every morning, at 8:30 o'clock. Instruction is offered in the Bible by competent instructors, and a series of lectures on various topics relating to the Bible is given by members of the Faculty. A committee from the association meets new students at the trains, and will be glad to assist them in finding rooms and boarding places. There will be sent to any address, on application, a hand-book giving valuable information to prospective students. Address the president of the association.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

The Young Women's Christian Association is an association of young women in the University, with aims similar to that of the Y. M. C. A. Regular meetings are held every Thursday afternoon, at 5 o'clock, and the organization unites with the Y. M. C. A. in the course of lectures mentioned above. An effort is also made at the beginning of the year to assist young women just entering the University in securing boarding places, and, when desired, places in homes where board may be obtained for assistance in housework.

WOMAN'S LEAGUE.

The Woman's League is an association organized to welcome the young women to the University, to aid them in securing boarding places, and to render them all other assistance in their power. It includes in its membership the women of the Faculty, the wives

of members of the Faculty, and the young women of the Senior class. One object of this league is to promote a healthful social life among students, who are cordially invited to the homes of its members.

SOCIETIES.

A Literary Society, a Moot Senate, a German Club, a French Conversation Club, a Science Club, a Language Conference, a Pharmaceutical Club, a Greek Symposium, a Civil Engineering Society, an Electrical Seminary and the Seminary of History and Political Science are regularly organized and maintained by the students. A large number of standard periodicals, furnished by these clubs, are placed in the University reading room for the use of all students.

TERMS AND VACATIONS.

The academic year is divided into two terms of equal length. the first beginning on the first Wednesday following the 4th of September; the second ending on the first Wednesday following the 5th of June.

There are two vacations: One, the summer vacation of 13 weeks, following the commencement, in June; the other, of two weeks, at the Christmas holidays. Besides these, Thanksgiving day and the following Friday and Monday, and Arbor day (Thursday), with the following Friday and Monday, are observed as holidays.

TUITION FREE.

Tuition is free to Kansas students in every school of the University, and no contingent or admission fee is required of inhabitants of the state.

The fees for non-residents are as follows:

School of Arts, per annum.....	\$10 00
School of Engineering, per annum.....	10 00
School of Law, per annum.....	25 00
School of Pharmacy, per annum.....	25 00
Preparatory Medical Course, per annum.....	25 00
School of Music, tuition for half term.....	35 00

The fee to cover cost of material used and apparatus broken is required in advance of all students in chemistry, pharmacy, medicine, physics, natural history, and civil engineering.

A graduation fee of \$5 is required in all departments.

EXPENSES.

There are no dormitories owned or managed by the University. Students find accommodations in the boarding houses and homes of Lawrence.

The average price of board, including rooms, light, and fuel, may be placed at \$4 a week. Some persons who furnish plain rooms and good, plain food, receive boarders at \$3.50 or even \$3 a week. Day board in private families and at city restaurants may be obtained for \$3 to \$4 a week.

Day board in clubs varies according to the economy practiced, from \$1.75 to \$2.50 a week. On this plan, a company of students appoints a steward or a committee to arrange terms with a competent housekeeper, to buy provisions as needed, to keep a list of rooms for rent in the vicinity, and to collect from the membership the cost for each week.

Furnished rooms, generally occupied by two students, cost from \$4 to \$10 a month.

The following is a fair estimate of yearly expenses:

Board, 40 weeks, at \$2 to \$3.50.....	\$80 00	to	\$140 00
Room rent, 40 weeks, 50 cents to \$2....	20 00	to	80 00
Washing	10 00	to	20 00
Books	15 00	to	30 00
Incidentals	15 00	to	50 00
Totals	\$140 00	to	\$320 00

Those who can supply the furniture for rooms, buying and preparing the provisions for the table themselves, can thus board for very little cost in money, not a few students actually going through at an expense of \$75 per annum.

All requests for further information should be addressed to the Registrar, State University, Lawrence, Kas.

Roll of Students.

School of Arts.

GRADUATE STUDENTS.

CANDIDATES FOR DEGREE—Resident.

Banker, George Willis, <i>History and Sociology</i> , . . .	Lawrence.
Bell, Alonzo Richard, B. A. (Kansas Wesleyan), <i>Philosophy</i> , Leland.	
Burney, Clarence Alexander, B. A., '95, <i>Economics</i> , . . .	Rantoul.
Crane, Walter Richard, B. A., '95, <i>Geology</i> , . . .	Dover.
Kirk, Mahlon Zimri, A. M. (Haverford), <i>Geol., Chem.</i> , Lawrence.	
Logan, William Newton, <i>Anatomy, Psychology, Geology</i> , Beloit.	
Miller, Clyde Winwood, B. A., '95, <i>American Hist., Eng.</i> , Emporia.	
Peterson, Bertha, <i>American Hist., Political Economy</i> , Lawrence.	
Reno, William Wilkinson, B. A., '93, <i>Phil., German</i> , Garden City.	
Riggs, Elmer Samuel, <i>Geology and Physics</i> , . . .	Lawrence.
Rouse, John Edward, B. A. (Lincoln University), <i>Philosophy</i> <i>and Pedagogy</i> ,	Lawrence.
Shafer, Bertha Bowles, B. A. (Elizabeth Aull), <i>English and</i> <i>German</i> ,	Greenfield, Mo.
Smith, Lucinda, B. A., '95, <i>English</i> ,	Lawrence.
Spalding, Gates Lyon, B. A. (Drury), <i>German, French</i> , Eureka.	
Wallace, Carl E., <i>History, Philosophy, and English</i> , Hamlin.	
Whitten, William Marion, B. S. (Michigan), <i>Chemistry</i> , Lawrence.	
Whitzel, Frank R., <i>English and German</i> , . . .	McPherson.

NON-RESIDENT.

Allen, Winfield Scott, B. A., '88, <i>American History</i> , . .	Newton.
Bowman, Nina Clare, B. A., '93, <i>English and History</i> , . .	Newton.
Craig, James Frank, B. A., '91, <i>History and Sociology</i> , . .	Wichita.
Doran, Thomas Francis, B. A., '88, <i>American History</i> , . .	Topeka.
Rush, Elmer Ellsworth, B. A., '95, <i>Sociology and Am.</i> <i>History</i> ,	Kansas City, Mo.
Spencer, Virginia E., B. A., '91, <i>English, French, Ger.</i> , . .	Lawrence.

NOT CANDIDATES FOR DEGREE—Resident.

Bowker, Frank Clarence,	McPherson.
Corbin, Alberta Lincoln,	Lawrence.
Miller, Samuel J.,	McPherson.
Sherman, Adrian Fisher,	Rossville.

Spencer, Mary Miranda,	Pleasanton.
Spencer, May Hotchkiss,	Lawrence.
Starr, Ida May,	Lawrence.
Sterling, Mrs. Cara F.,	Lawrence.
Williamson, Park Austin,	Edwardsville.

NON-RESIDENT.

Adams, George Irving,	Princeton, N. J.
Bennett, John,	Fort Scott.
Harnly, H. J.,	McPherson.
Knerr, Ellsworth B.,	Atchison.
Pampel, Byron Lee,	Centralia.
Sharp, S. Z.,	McPherson.
	Graduates, 33.

SENIORS.

Alford, Alfred Cecil,	Lawrence.
Alison, Daisy,	Paola.
Bates, Albert Bonsteel,	Chetopa.
Breese, Burtis Burr,	Reece.
Brewster, Frederick William,	Iola.
Brewster, Grace Hannah,	Iola.
Brown, Clydus Clinton,	Greenwich.
Burd, Mary,	Wichita.
Butcher, Hardin Price,	Wellington.
Caughey, Rudolph,	Horton.
Chamberlain, Lawrence Safford,	Topeka.
Churchill, Lena Blanche,	Lawrence.
Claassen, Peter A.,	Emporia.
Cooke, Carina Antoinette,	Herington.
De Weese, Harriette Viola,	Wamego.
Dillard, Mary Jane,	Lawrence.
Edwards, Anna Gosline,	Doniphan.
Ellis, Leander Dallas,	Dodge City.
Foster, Dean,	Medford, Ok.
Fryar, Oscar James,	Burrton.
Gernon, Nicholas Andrew,	Russell.
Glahart, Albert B.,	Lawrence.
Gowell, Ralph Curtis,	Linwood.
Grant, Aaron George,	Osage City.
Griffiths, Walter,	Weber.
Hall, Mabel Ruth,	Lawrence.
Hammers, Fred Ketcham,	Clear Water.
Hardy, Linda,	Hiawatha.
Henderson, John H.,	Iola.
Hill, Irving,	Neodesha.
Hoover, Rhoda Lulu,	Columbus.

House, Frank E.,	Lawrence.
Hullinger, Joseph Warren,	Junction City.
Johnson, Charles Edward,	Garden City.
Kinzie, John Frederick,	Hiawatha.
Logan, William Newton,	Beloit.
Ludlum, Elmer Charles,	Salina.
Madden, Robert Thornton,	Salina.
Madden, William Joseph,	Hays City.
Magaw, William Joseph,	Valle-Vista, Calif.
Menet, Francis Graves,*	Lawrence.
Moon, Francis Kearney,	Topeka.
McCroskey, Ward Carpenter,	Peabody.
McMurray, Arthur,	Lawrence.
Nichols, Maude Estelle,	Olathe.
Page, Larrance,	Augusta.
Patten, James Horace,	Paola.
Perry, Helen,	Englewood.
Pope, Horace Greeley,	Manhattan.
Prentice, Sydney Clarke,	Lawrence.
Quinlan, Cassie Alma,	Lawrence.
Raymond, Fred. Newton,	Lawrence.
Riggs, Elmer Samuel,	Lawrence.
Rohe, Alice,	Lawrence.
Stahl, William Lincoln,	Lawrence.
Stewart, Alban,	Odessa, Mo.
Thierstein, John R.,	Brainard.
Thoburn, Blanche Isabel,	Peabody.
Thompson, Agnes,	Lawrence.
Towne, Louise Isabella,	Lawrence.
Watson, Lucy,	Shawnee.
Way, Eva,	Holton.
White, Dora Estella,	Topeka.
Whitzel, Frank R.,	McPherson.
Wick, Carl,	New Chillicothe.
	Seniors, 65.

JUNIORS.

Alder, Eugene Charles,	Lawrence.
Ayres, Harriett Hull,	Lawrence.
Barber, Emma Maude,	Lawrence.
Brown, Lola Bell,	Lawrence.
Clarke, Adna Girard,	Lawrence.
Clarke, Florence Greeley,	Lawrence.
Cooke, May,	Herington.
Crooks, John Wesley,	Morse.

*Deceased.

Darling, Alice Grace,	Lawrence.
Davies, Howell Emlyn,	Topeka.
Davis, Edith,	Topeka.
Everett, Robert Edward,	Pleasanton.
Falloon, Arthur Leslie,	Hiawatha.
Faulkner, Coryell,	Atchison.
Faxon, Ada,	Lawrence.
Fay, Charles Lyman,	Bayneville.
Flint, Leon Nelson,	Lawrence.
Frazer, Frances Rebekah,	Lawrence.
Gardner, May,	Lawrence.
Gear, Dudley Dale,	Greeley.
Greenfield, Sadie E.,	Sabetha.
Griffin, William Ernest,	Kansas City.
Grove, Bessie Eleanor,	Frankfort.
Hall, John Franklin,	Easton.
Hamaker, Jacob Gish,	Abilene.
Harris, Fred. Milo,	Ottawa.
Heil, Louis Peter,	Vidette.
Hester, Oran Thomas,	Haviland.
Hitchcock, William E.,	Winfield.
Howland, Constance Genevieve,	Lawrence.
Ikenberry, Levi Daniel,	Wirtz, Va.
Jamieson, William Culver,	Holton.
Katherman, Carrie Belle,	Lawrence.
Katherman, Charles Augustus,	Lawrence.
Landis, Maude,	Lawrence.
Leverett, Carrie Gertrude,	Horton.
Littlefield, Lulu,	Holton.
Mann, Andrew Wilson,	Horton.
Menke, Harry William,	Garden City.
Miller, Annie Laurie,	Peabody.
Miller, Benjamin Leroy,	Sabetha.
McCall, Bert Bernard,	Belleville.
McClung, Clarence Erwin,	Columbus.
McMurray, Will.,	Lawrence.
Nash, Lou,	Topeka.
Noyes, Alfred Harvey,	Lawrence.
Oliverson, Minnie Jane,	Winfield.
Opp, Schuyler,	Wa Keeney.
Osborn, Roy Thornton,	Salina.
Parrott, Percival John,	Lawrence.
Price, Richard Rees,	Hutchinson.
Reed, Will. Thomas,	Topeka.
Riggs, May Fuller,	Lawrence.
Robinson, Roy Martin,	Winfield.
Rohrer, Christian A.,	Dillon.

Sampson, William Beach,	Salina.
Sharpe, Charles Manford,	Lawrence.
Shire, Anna Matilda,	Leavenworth.
Sinnott, Evangeline Mary,	Oswego.
Smith, Harold Weeks,	Kansas City, Mo.
Smith, Ida Greeley,	Lawrence.
Smith, Joseph Elijah,	Minneapolis.
Snow, Morton McCulloch,	Topeka.
Stanton, Alta,	Lawrence.
Sterling, Charles Morgan,	Dayton.
Stevens, George Walter,	Emporia.
Stewart, Robert Lowry,	Lyons.
Thomas, Gomer,	Emporia.
Todd, Luther Anson,	Atchison.
Warren, Elizabeth,	Brookfield, Mo.
Wood, Frederick Hill,	Lawrence.
	Juniors, 71.

SOPHOMORES.

Addison, Mayme,	Salina.
Anderson, Ella Marie,	Morganville.
Atchison, William Charlton,	Wichita.
Atkinson, Lloyd Hardy,	Kansas City.
Boone, Victor Orsino,	Baxter Springs.
Bowersock, Hortense MacDonald,	Lawrence.
Brewster, Reginald Raymond,	White Cloud.
Bromelsick, Walter Wendell,	Lawrence.
Brown, Barnum,	Carbondale.
Burton, Detroit Lee,	Echo.
Cady, Hamilton Perkins,	Lawrence.
Cavin, Alberta R.,	Lawrence.
Chapman, Gertrude May,	Seneca.
Cheadle, John Begg,	Erwin, Ok.
Clark, William Haskell,	Warrensburg, Mo.
Clock, Wilkie Clyde,	Topeka.
Crawford, Leora Anna,	Neodesha.
Criss, Nellie Vincent,	Lawrence.
Crotty, Julia Geraldine,	Burlington.
Douglass, Walter Woodroe,	Colony.
Douthart, Henrietta,	Willis.
Dowden, James Henry,	Lamar.
Dryden, Nellie,	Mulvane.
Ellis, George Washington,	Lawrence.
Engle, John Howard,	Enterprise.
Field, Rhoda Kidder,	Solomon.
Frisselle, John Earl,	Blue Rapids.
Gallup, Stella Cornelia,	Blue Rapids.

Gephart, Eleanor Marshall,	Valley Falls.
Glick, Frank Lewis,	Junction City.
Goodrich, Albert Calvin,	Leavenworth.
Grover, Ruth Newhall,	Leavenworth.
Hall, Justus Otho,	Morse.
Hamill, Bertrand Dewey,	Lawrence.
Hamill, Claude Emmett,	Lawrence.
Hamilton, Homer,	El Dorado.
Hammers, Brice Evans,	Clear Water.
Haven, Elmer Franklin,	Belleville.
Henderson, Willis Eddy,	Iola.
Hess, Harrison Henry,	Wichita.
Hickey, Ethel Ailene,	Lawrence.
Hoch, Willie Ella,	Marion.
Hoge, Albert Kinsey,	Lawrence.
Irwin, Edward Payson,	Lawrence.
Jackson, Arthur P.,	Centralia.
Johnson, Frank Hilliard,	Lawrence.
Johnson, William Oscar,	Robinson.
Johnstone, Anna Florence,	Wamego.
Kelley, Elmer Willard,	Frankfort.
Kellogg, Frances Elizabeth,	Dodge City.
Kelly, David Clarke,	Gardner.
Kirby, Laura Ellen,	Tonganoxie.
Laughlin, Irving Scott,	Foster, Mo.
Loomis, Charles Henry,	Tonganoxie.
Macomb, John Navarre, jr.,	Lawrence.
Menet, Kate,	Lawrence.
Merrifield, Orlo Ellsworth,	Waverly.
Mershon, Jennie Rebecca,	Buckner, Mo.
Mitchell, Lansing Lee,	Salina.
Moore, Clinton James,	Oketo.
McCurdy, Anna Vesta,	Hutchinson.
McGregor, Mabelle Christa,	Winfield.
McKinnie, Ralph Girard,	Beloit.
Netherton, Raleigh Lawrence,	Eureka.
Neuenschwander, Elise,	Wa Keeney.
Northrup, Fred. Dettmar,	Kansas City.
Northrup, John Frederick,	Kansas City.
Penfield, George William,*	Topeka.
Pennington, Celia Emily,	Lawrence.
Perry, Lewis Barnum,	Englewood.
Phillips, Arthur Lee,	Mulvane.
Phillips, Duff G.,	Roland.
Pollard, Evangeline Myrtle,	Nickerson.

*Deceased.

Potts, Issie Bronder,	Paola.
Rench, William Stull,	Dighton.
Rising, George Henry,	Salina.
Rosenquist, Flora Isabelle,	Neosho Rapids.
Rush, Minnie Dell,	Lawrence.
Senn, Lydia Pecoli,	Enterprise.
Sierer, Guy Bowen,	Emporia.
Simkins, Louise Holbrooke,	Salina.
Simpson, Ernest Guy,	Beloit.
Souder, Alvah,	Newton.
Spencer, Alice Isabelle,	Pleasanton.
Steele, Harry Edwin,	Maize.
Stone, Charles Waterman,	Lawrence.
Summerfield, Solon Erb,	Lawrence.
Turner, Nena Belle,	Peabody.
Wagner, Charles Albertis,	Horton.
Wakefield, Margaret,	Humboldt.
Walton, Clara Belle,	Winfield.
Walton, Clyde,	Burden.
Ward, Blanche,	Lawrence.
Wardner, Albert E., jr.,	Kansas City, Mo.
Watson, Rachel Hammond,	Lawrence.
Wickersham, Lulu,	McPherson.
Wilder, Webster,	Hiawatha.
Wing, Herbert,	Newton.
Zahniser, Chalmers Andrew,	Reserve.
Zimmerman, Hattie,	Hiawatha.
Zimmerman, Minnie Ella,	Lawrence.

Sophomores, 101.

FRESHMEN.

Abel, Anna Heloise,	Salina.
Ayres, Bessie Perry,	Lawrence.
Baillie, Gertrude,	Lawrence.
Baillie, Veda,	Lawrence.
Baker, Hulda Jane,	Burton.
Baker, Sadie Isabel,	Yates Center.
Bales, Arthur John,	Prairie Center.
Bear, Conie,	Paola.
Bennett, Mabel Jean,	Greensburg.
Blakely, Ellen Jerusha,	Junction City.
Boone, Frances Elmo,	Lawrence.
Boring, Nellie Catherine,	Osborne.
Bowen, Bertha,	Centralia.
Bowersock, Mary Gower,	Lawrence.
Bradford, Lewis Henry,	Topeka.
Brosius, Iona,	Hays City.

Buehler, Edwin,	Hiawatha.
Burdick, Cary Lovell,	Carbondale.
Case, Frank Elwell,	Marion.
Case, Ida May,	Norton.
Case, Stella McKenzie,	Norton.
Classer, Zella Ethel,	Chetopa.
Cloyes, John Marshall,	Lancaster.
Cochran, Fred. Wilson,	Osborne.
Colman, Nellie Mabel,	Lawrence.
Collins, John Henry,	Topeka.
Coon, Florence Eugenia,	Blue Rapids.
Corse, Edgar Burton,	Lawrence.
Cory, Alice Alberta,	Drexel, Mo.
Cowley, Laurence Leon,	Columbus.
Cramer, Vinnie Mae,	Lawrence.
Cross, Blanche Lucile,	Neodesha.
Cross, Walter Martin,	Wa Keeney.
Cubine, Georgia,	Coffeyville.
Cubine, Grace Giulia,	Coffeyville.
Curry, Ida Elizabeth,	Winchester.
Cutter, Charlotte Varnum,	Vinland.
Dale, Ella Alice,	Belleville.
Davis, Harry Glenn,	Chetopa.
DeNeen, Marion,	Lawrence.
Diesem, Harry Custer,	Garden City.
Dillon, Arthur,	Eureka.
Douthart, Lela Ferrel,	Pratt.
Duff, Grace Leah,	Horton.
Eastin, Frank Anna,	Greenfield, Mo.
Edwards, Mañel Hannah,	Emporia.
Eldridge, Nellie Augusta,	Lawrence.
England, Celia,	Topeka.
Field, Florence,	Solomon.
Field, Russell Willard,	Solomon.
Fiestor, Lela Ednyl,	Whiting.
Finch, Ursel,	Harper.
Fox, Ethel Lynn,	Lawrence.
Fuller, Cora Jane,	Eureka.
Funston, Aldo,	Carlyle.
Gear, Charles Mason,	Clifton.
Goode, Mary Lane,	Olathe.
Graham, Walter Baber,	Brantford.
Gregg, George Archibald,	Eureka.
Grimes, George,	Hiawatha.
Hayes, Beatrice Bertha,	Lawrence.
Hazen, Raymond Crandall,	Lawrence.
Henry, John Jacob,	Lawrence.

Henry, Lillie Edith,	Lawrence.
Hessin, John Clarke,	Manhattan.
Hogg, James Franklin,	Columbus.
Hudson, Andrew,	Fredonia.
Hyde, Emma,	Geneva.
Ide, Arthur Wheaton,	Creston, Iowa.
Jaedicke, Christine,	Lawrence.
Johnson, Bessie,	Winfield.
Jones, Walter Casius,	Iola.
Kelley, Walter Lawrence,	Frankfort.
Kennedy, Albert Rutherford,	Lawrence.
Kirkwood, Elizabeth Timanus,	Overbrook.
Knapp, Maude Lulu,	Hutchinson.
Lane, Oscar Jasper,	Lawrence.
Laycock, Marion Francis,	Marysville.
Lewelling, Pauline,	Wichita.
Lindas, Edward Starks,	Pawnee Rock.
Lofty, John,	Osage City.
Lynn, Clara Gattrell,	Kansas City, Mo.
Maggard, Delano Irvin,	Oxford.
Majors, Joseph Oliver,	Girard.
Means, Hugh,	Lawrence.
Morison, William Brooke,	Centralia.
Mueller, Robert Gottlieb,	Lawrence.
Murray, Joseph P.,	Lawrence.
Myers, Minnie Belle,	Lawrence.
McCaughan, Elizabeth,	Olathe.
McClair, Charles,	Carbondale.
McCleery, John Scott,	Fort Leavenworth.
McGee, Charles James,	Leavenworth.
McGrade, Mayme Eleanor,	Lawrence.
McKee, Robert Grable,	Newton.
Nelson, Wilfred Wycliffe,	Iola.
Newcomer, Sadie Elizabeth,	Hope.
Northrup, Austa Adele,	Lawrence.
O'Connor, Armon Styles,	Grenola.
Olsen, Louis Bernard,	Tonganoxie.
Parsons, Anna Esther,	Neosho Falls.
Parsons, William Sherrill,	Neosho Falls.
Pearce, Rosa Frances,	Lawrence.
Pendleton, Ellen,	College Mound, Mo.
Playter, Clarence Carpenter,	Pittsburg.
Plummer, George Wesley,	Perry.
Pratt, Frank Preston,	Phillipsburg.
Radford, Agnes,	Lawrence.
Radford, Florence,	Lawrence.
Riggs, Lucy Young,	Lawrence.

Rose, Clinton Emmet,	Concordia.
Rumold, Christian Ferdinand,	Dillon.
Sayre, Ellen Mabel,	Lawrence.
Schoeler, Eva,	Wamego.
Seeds, Guy Clifford,	Garden City.
Sellards, Elias Howard,	Scranton.
Shepherd, William Mentry,	Girard.
Shepp, Edwin Benjamin,	Lawrence.
Sherman, Glen,	Seneca.
Shinn, Edwin Frank,	Quenemo.
Shoemaker, Wayland Star,	Centralia.
Simpson, Charles Hoke,	Beloit.
Sluss, Clarence Alfred,	Wichita.
Smith, Luman Lucius,	Ottawa.
Snediker, Maude E.,	Hartford.
Snyder, James Roger,	Augusta.
Spiers, Edward Bruce,	Chase.
Spiers, Kate,	Chase.
Sprague, Gertrude Blanch,	Wamego.
Stanford, Cecile Armenta,	Lawence.
Stanley, William Harvey,	Lawrence.
Starr, Daisy Olive,	Topeka.
Taylor, Isaac Daniel,	Hartford.
Tindall, Mary Evangeline,	Lawrence.
Tomlinson, Sallie Rachel,	Villisca, Iowa.
Trauger, Cliftone Ruby,	Lawrence.
Turner, Arthur Newton,	Peabody.
Van Nuys, Walter Crowe,	Osawatomie.
Vickers, Charles Price,	Paola.
Vickers, Elizabeth May,	Paola.
Walker, Cora Edith,	Eudora.
Warren, Northam,	Brookfield, Mo.
Watson, Rosalia Blanche,	Lawrence.
Williams, Edward Marsh,	Burlington.
Wood, William Christian,	Colby.
Zimmerman, Cornelia Virginia,	Lawrence.
	Freshmen, 146.

SPECIALS.

Ahlum, Walter,	Hiawatha.
Campbell, Edward Stuart,	Anthony.
Clark, Arthur Wellington,	Lawrence.
Clarke, Fred. Adam,	Lawrence.
Crew, Katherine,	Haddam.
Crew, Elizabeth,	Haddam.
Davis, Clarence,	Stockton.
Davis, Katherine Forest,	Stockton.

Esterley, George Aden,	Lawrence.
Ewart, Anderson Andrew,	Kansas City, Mo.
Felt, Palmer Bryant,	Barnes.
Gallup, Mina Lois,	Blue Rapids.
Grover, Joel,	Lawrence.
Herrington, Frances Adelaide,	Lawrence.
Hoag, Laura Emma,	Lawrence.
Hopkins, Richard Joseph,	Garden City.
Hull, Arthur Sinclair,	Great Bend.
Ijams, John Wesley,	Osawkie.
Jamieson, Anna S. (Mrs.),	Holton.
Kelley, Fannie J.,	Burlington.
Kennedy, L. Belle,	Lawrence.
Kennedy, Linnie,	Lawrence.
Keve, Wiley Ames,	Abilene.
Kingsley, George, jr.,	Paola.
Lewis, John Meriman,	Lawrence.
Limbocker, Myron Arthur,	Manhattan.
Lloyd, Myrtle M.,	Oswego.
Lyon, William Maclay,	Topeka.
Martin, Emma,	Lawrence.
Masters, Calvin Augustus,	Burr Oak.
Metcalf, Helen Griffin,	Topeka.
Mitchell, Rolla Ray,	Atchison.
Moore, Daisy,	Las Animas, Colo.
Moseley, Hamilton Alexander,	St. Louis, Mo.
Murray, Murdo Charles,	Lawrence.
Myers, Willis Lewis,	El Dorado.
Newton, William Frederick,	McCracken.
Nicholson, Leoti,	Lawrence.
Northrup, Ester Estella,	Lawrence.
Priestley, Carrie J.,	Lawrence.
Ralston, Elmer,	Uniontown.
Rench, Charles Edward,	Fredonia.
Renn, Eliza Lulu,	Wellington.
Renn, Dora Catharine,	Wellington.
Ricksecker, Thomas Levi,	Beaver Dam, Wis.
Robertson, Frank Hamilton,	Lawrence.
Robinett, Edward Kelley,	Garnett.
Sanford, Walter Henry,	Kansas City, Mo.
Scammon, Angie M.,	Cherokee.
Schmitz, Oscar,	Alma.
Snow, Martha Boutelle,	Lawrence.
Snow, Mary Margaret,	Lawrence.
Stafford, Orin F.,	Altoona.
Stevens, Anna Ruble (Mrs.),	Emporia.
Sutton, William Black,	Russell.

Sweezy, Schuyler Colfax,	Olivet.
Swem, Earl Gragg,	Delhigh, N. Y.
Symons, Arthur Henley,	Lawrence.
Thacher, Edith,	Topeka.
Topham, Emma Block (Mrs.),	Lawrence.
Tucker, Elbert Stephen,	Lawrence.
Wright, Ralph Waldo,	Emporia.
	Specials, 61.

PREPARATORY MEDICAL.

Ballinger, John Ralph,	Atchison.
Couch, Verlan Stanley,	Prairie Center.
Kaull, Lee Perry,	Beloit.
McCorkle, Harry Beecher,	Independence.
O'Dell, Frank Beasley,	Lawrence.
Outland, John Henry,	Glen Elder.
Pope, Charles Stevens,	Manhattan.
Smith, Welcome King,	Peabody.
Stout, Philip Ray,	Tonganoxie.
Swayze, Jason Clarke,	Topeka.
	Preparatory Medical, 10.

School of Engineering.

GRADUATE.

Williamson, Orah Kilburn, E. E.,	Edwardsville.
	Graduate, 1.

SENIORS.

Albers, George Rockwell, E. E.,	Junction City.
Armor, Charles Webster L., C. E.,	Farmington.
Crew, Charles Corwin, C. E.,	Haddam.
Daniels, Frederick Percy, C. E.,	Girard.
Galbreath, William Otto, C. E.,	Lawrence.
Morscher, Lawrence Norton, E. E.,	Neodesha.
Schroder, Albert Vincent, E. E.,	Topeka.
Squire, William John, E. E.,	Sterling.
Wagner, Henry William, C. E.,	Enterprise.
	Seniors, 9.

JUNIORS.

Anderson, Frederick Elmer, E. E.,	Marquette.
Brooks, Walter Thompson, C. E.,	Kansas City, Mo.

Cain, Herman, E. E.,	White Cloud.
Cox, Herbert Frederick, E. E.,	Junction City.
Fletcher, Charles William, E. E.,	Atchison.
Hancock, William Luther, E. E.,	Lawrence.
Jio, Mamoru, E. E.,	Tokio, Japan.
Kraus, Charles August, E. E.,	Hays City.
Meyers, Alfred Moyer, C. E.,	Peabody.
O'Neil, W. Roscoe, E. E.,	Wellsville.
Rockwood, Sidney Hunt, E. E.,	Cottonwood Falls.
Sears, Thomas Bartlett, C. E.,	Tescott.
Unwerth, Hans von, C. E.,	Kansas City, Mo.
Walker, William Thomas, E. E.,	Lawrence.
Wise, Alfred James, C. E.,	Lawrence.
	Juniors, 15.

SOPHOMORES.

Agnew, Ernest H., E. E.,	Minneapolis.
Anderson, Paul, E. E.,	Stanton.
Arnold, Deane Collier, E. E.,	Louisville.
Bretch, Edward, E. E.,	Newton.
Campbell, James Edgar, E. E.,	Warrensburg, Mo.
Canavan, Asa Lord, E. E.,	North Lawrence.
Drysdale, John Morrison,* C. E.,	Lawrence.
Fletcher, Roy Merriam, E. E.,	Atchison.
Gilmore, Frank Lansing, E. E.,	Lawrence.
Graves, George Joshua, C. E.,	Topeka.
Haggart, Cecil Neil, C. E.,	Salina.
Lee, John Merrill, E. E.,	Kansas City, Mo.
Lothholz, Harry Charles, C. E.,	Chicago, Ill.
Macomb, John Navarre, jr., C. E.,	Lawrence.
Norton, Edwin Willett, E. E.,	Newton.
Plumb, Preston Bierce, E. E.,	Emporia.
Sanderson, John Christopher, E. E.,	Rich Hill, Mo.
Seckler, Harry H., E. E.,	Leavenworth.
Watson, Malcolm Vau, E. E.,	Lawrence.
	Sophomores, 19.

FRESHMEN.

Alexander, James Richard, C. E.,	Kansas City, Mo.
Barnes, Joseph Curtis, E. E.,	Sedgwick.
Bayless, Otis Alonzo, E. E.,	Lawrence.
Bright, Robert Paul, E. E.,	Fort Scott.
Clark, Harry G., C. E.,	Leavenworth.
Coppedge, Robert William, E. E.,	Langdon.
Daniels, Walter Horton, C. E.,	Girard.

*Deceased.

Davis, Charles Henry, E. E.,	Marysville.
Drysdale, James Murray, E. E.,	Lawrence.
Fiestler, Cecil Beaumont, E. E.,	Whiting.
Fletcher, John Herbert, E. E.,	Fort Scott.
Fullenwider, Charles Munsell, E. E.,	El Dorado.
Gordon, Joseph Wesley, E. E.,	Horton.
Gregg, Virgil H., E. E.,	Attica.
Griggs, Sidney Wesley, E. E.,	Lawrence.
Hamilton, Dillon, E. E.,	El Dorado.
Haynes, Roy Scott, C. E.,	Leavenworth.
Holliday, Frank Mortimer, E. E.,	Hutchinson.
Holsinger, George Wilmer, E. E.,	Rosedale.
Jensen, Carl Peter, E. E.,	Lawrence.
Jobs, Harry C., E. E.,	Attica.
Keely, Royal Rockwood, E. E.,	Augusta.
Kyser, Willis Melvin, E. E.,	Grenola.
Lakin, David Long, jr., C. E.,	Topeka.
Leppien, Edward, E. E.,	Cherry Vale.
Matthews, Fred. Elwood, E. E.,	Lawrence.
Pickett, Oren Gordon, C. E.,	Kansas City, Mo.
Ransom, Willard Gledden, E. E.,	Ottawa.
Schreiner, Clarence Weldon, E. E.,	Abilene.
Smith, Richard James, E. E.,	Kansas City, Mo.
Trueblood, Erwin Earl, C. E.,	Lawrence.
Voigts, Emil Elmer, C. E.,	Rosedale.
Walker, Horace Maynard, E. E.,	Baxter Springs.
White, Martha Ellen, C. E.,	Junction City.
	Freshmen, 34.

SPECIALS.

Ashbrook, Roy Wilson, E. E.,	Linwood.
Burkholder, Philo Semple, C. E.,	Harper.
Crebo, William George, C. E.,	Eureka.
Marcy, Frank Earl, E. E.,	Lawrence.
Morris, Joseph Harrison, C. E.,	Leavenworth.
Penfield, Fred. C., E. E.,	Lawrence.
Powers, Rufus Walter, E. E.,	Canton.
Schroeder, Howard Walter, E. E.,	Wichita.
Shepherd, Coy Jasper, E. E.,	Plattsburg, Mo.
Stewart, William James, E. E.,	Topeka.
Sullivan, Frank LaZelle, E. E.,	Lawrence.
Walker, Herman, E. E.,	Baxter Springs.
Wight, Phillip Henry, E. E.,	Lawrence.
	Specials, 13.

School of Pharmacy.

SENIORS.

Carter, Clarence Alvin,	Topeka.
Crafts, John,	Alma.
Dryden, John Lakin,	Buffalo.
Fisher, Dora Catharine,	Soldiers' Home, Leavenworth.
Fuller, Herbert Morton,	Seneca.
Gilmore, Mark Ernest,	Topeka.
Gray, Spurgeon Nathaniel,	Lawrence.
Harbourt, Charles Ross,	Coffeyville.
Hedges, Grace Lydia,	Grinnell, Iowa.
Jacquemin, William Richard,	Oskaloosa.
Kelly, Herma Tabettha,	Burlington.
Lear, James Mason,	Mound Valley.
Mason, Myron Robinson,	Lawrence.
Meyer, August Albert,	Alma.
Miller, James Edward,	Purcell.
McCoy, David Leroy,	Beattie.
Nagels, Leon,	St. Mary's.
Palmer, Charles Francis,	Leon.
Roberts, William Osman,	Lawrence.
Scheffer, Samuel Montgomery,	Minneapolis.
Sprague, Frank Marion,	Hiawatha.
Stewart, John Solomon,	Mulvane.
Wherrell, Orta,	Kansas City.
Wohlfrom, Eugene Peter,	Leavenworth.
Woodward, Chester,	Lawrence.
Young, Clarence Floyd,	Topeka.

Seniors, 26.

JUNIORS.

Allen, Peter Wesley,	Atchison.
Allen, Rufus Hugh,	Sedgwick.
Baldrige, Charlie Wilson,	Kansas City.
Brady, Francis Frederick,	Springdale.
Bushby, DeWitt Coombs,	Lawrence.
Callison, Robert Clyde,	Chillicothe, Mo.
Chastain, Victor Hugo,	Walla Walla, Wash.
Clark, Edward Justin,	Summerfield.
Davis, Alfred Collins,	Lawrence.
Gleason, Leon Wilbur,	Seneca.
Horne, William,	Alma.
Huff, George Washington Edwin,	Savonburg.
Ingham, William Vance,	Lecompton.

Logan, Robert Dickey,	Ottawa.
Long, Don Edmund,	Peabody.
Maxwell, William Lothrop,	Paola.
Meyer, Edward William,	Hutchinson.
Murray, Joseph Patrick,	Lawrence.
McKee, Logan David,	Hutchinson.
McMasters, Robert Truit,	Topeka.
Nabb, Charles White,	Stafford.
Nixon, Willie Elmer,	Girard.
Norris, Guy Brunnaugh,	Garden City.
Ozias, Ernst Lawrence,	Centralia.
Price, Claud Edwin,	Everest.
Price, Loring Templeton,	Burlingame.
Ringer, William Henry,	Paola.
Smith, Almeda Louise,	Lawrence.
Squire, Samuel Webner,	Chanute.
Stauffer, Jesse Ebersole,	Lecompton.
Todd, Herbert Gregor,	Topeka.
Tuttle, Charles Henry,	Cedar Vale.
Winston, John Clarence,	Lawrence.
	Juniors, 33.

SPECIALS.

Blackburn, Homer J.,	Douglass.
Griffiths, James Ellsworth,	Eureka.
Mathias, John Thomas,	Rosedale.
Rankin, Claude Wesley,	Idana.
	Specials, 4.

School of Law.

SENIORS.

Berner, Claude S.,	Fort Scott.
Beveridge, Anna May,	Lawrence.
Brady, Felix Edward,	Springdale.
Chadwick, Ralph Emmett,	Lawrence.
Clark, John Warren,	Lawrence.
Cowden, William Long,	Ashland.
Crowe, Isaac Franklin,	Kansas City.
Cullison, Ethelbert Howard,	Cherokee.
Dias, Mina Perky,	Lawrence.
Elting, Cornelius Houseman,	Ness City.
Foresman, J. Homer,	Burlingame.

Gardner, Wilbur Ludington,	Lawrence.
Gladfelter, William Burtner,	Wichita.
Higgins, William Houston,	America City.
Hitchcock, Jess Reynolds,	Cherokee.
Hogg, Archie,	Lawrence.
Holler, David B.,	Conway Springs.
Johnson, Alexander Dow,	Pleasanton.
Leonard, Calvin H.,	Quenemo.
Light, Will Harrison,	Topeka.
Lookabaugh, Edwin Harmes,	Atchison.
Madden, Terry John,	Summerfield.
Manley, Robert C.,	Lawrence.
Mason, William Harris,	Kansas City.
Menger, Louis Herman,	Lawrence.
McWilliams, Robert Buchanan,	Lawrence.
Piatt, William Henry Harrison,	Frankfort.
Pope, Warner St. Clair,	Lawrence.
Prunty, Leonard William,	Wamego.
Querry, Archibald Robert,	Winfield.
Ralston, William Chalmers,	Topeka.
Roark, Michael Edward,	Sharon Springs.
Roark, Robert Ingersoll,	Sharon Springs.
Rogers, William Andrew,	Wamego.
Simmons, Thomas Willard,	Goodland.
Simpson, John Andrew,	Lawrence.
Snell, William D.,	Oskaloosa.
Symons, Arthur Henley,	Lawrence.
Thompson, Isaac Edgar,*	Lawrence.
Troxel, Cloyd Roscoe,	Abilene.
Tucker, John W.,	Cawker City.
Watson, William James,	Pittsburg.
	Seniors, 42.

JUNIORS.

Alford, Alfred Cecil,	Lawrence.
Anderson, William Alexander,	Emporia.
Ashwill, Eugene,	Ottawa.
Bates, A. B.,	Chetopa.
Bierly, Greene Wickliff,	Garnett.
Blackshere, Harold Marion,	Elmdale.
Breese, Ralph Braden,	Elmdale.
Buren, Nathaniel Cleophas,	Lawrence.
Burney, Clarence Alexander,	Rantoul.
Butts, Rutherford Beecher Hayes,	Mound Valley.
Caldwell, John William,	Leoti.

*Deceased.

Campbell, Edward Stuart,	Anthony.
Campbell, Nathan Winnet,	Edgerton.
Campbell, Robert Bruce,	Fort Scott.
Clark, Adna Girard,	Lawrence.
Cole, La Grande Lockwood,	Minneapolis.
Colvin, Joseph Leland,	Burr Oak.
Crum, Arlon Bertram,	Quenemo.
Darling, Thomas Henry, jr.,	Lawrence.
Davis, Brick Pomeroy,	Oskaloosa.
Ferguson, Eugene Linton,	Seneca.
Ferrel, Lewis G.,	Stanley.
Foster, Nathaniel Thomas,	Gardner.
Freeland, William Merton,	Paola.
Games, Moses William,	Baldwin.
Gear, Dudley Dale,	Greeley.
Gernon, Nicholas Anderson,	Russell.
Guyer, Ulysses Samuel,	St. John.
Harley, Thomas,	Geneseo.
Gump, Fred. Black,	Kansas City.
Hoover, William Christopher,	Columbus.
Horton, Albert H.,	Topeka.
Howsley, Robert Lucelles,	Leavenworth.
Jacobs, James Franklin,	Lawrence.
Kingsley, George, jr.,	Paola.
Lewis, John Meriman,	Lawrence.
Limbocker, Myron Arthur,	Manhattan.
Lucas, Charles Ira,	Lawrence.
Martindale, George William,	Emporia.
Metcalf, Wilder Stevens,	Lawrence.
Miller, Clyde Winwood,	Osage City.
Miller, Warren Gus,	Minneapolis.
Myers, Harry J.,	Lawrence.
McCain, Eugene Lewis,	Emporia.
McEwen, Charles Edward,	Mound Valley.
Neihart, Cassius Tyndall,	Carbondale.
Noyes, Alfred Harvey,	Lawrence.
Parks, Isaac Kane,	Bonita.
Parks, Wade Roscoe,	Bonita.
Phillips, Oliver Clyde,	Roland.
Pope, Horace Greeley,	Manhattan.
Robinett, Edward Kelley,	Garnett.
Rucker, Christopher,	Drexel, Mo.
Schmitz, Oscar,	Alma.
Sefton, Charles A.,	Wichita.
Sheldon, Edwin,	Lawrence.
Sherman, Adrian Fisher,	Rossville.
Sherman, Guy,	Seneca.

Slawson, Marion G.,	Girard.
Smith, Thomas D.,	Hiawatha.
Solt, Clarence John,	Barnes.
Spellman, Clarence Irving,	Kansas City, Mo.
Stanley, Frederick Bartlett,	Lawrence.
Swayze, Horace George,	Topeka.
Tate, Sidney Swanwick,	Lakin.
Trinkle, Henry Oscar,	La Cygne.
Van Pelt, William Oliver,	Winfield.
Wagstaff, Thomas Edward,	Lawrence.
Wall, Nathaniel Anthony,	Solomon.
Watson, William James,	Pittsburg.
Wellman, Harry Wilbur,	Lawrence.
Wells, Robert Wesley,	Coffeyville.
Wilson, Palmer Stanton,	Peabody.
Wourms, John Henry,	Newton.
	Juniors, 74.

SPECIALS.

Hazzan, Elijah B.,	Lawrence.
Homer, Solomon Jones,	Bennington, I. T.
Pierce, George Leonard,	Cherry Vale.
Pierson, Robert Abraham,	Herington.
Stevens, Martin Van Buren, M. D.,	Lawrence.
	Specials, 5.

*School of Fine Arts.**Courses in Music.*

GRADUATES.

Lichtenwalter, E. Geneve,	Toledo, Ohio.
Orton, Daisy,	White Cloud.
Lingard, Sarah Elizabeth,	Ottawa.
Smith, Louise T.,	Lawrence.
Soxman, Clara Belle,	Lawrence.
Wilson, Mattie Lulu,	Holton.
	Graduates, 6.

FOURTH YEAR.

Drake, Anna Adelia,	Lawrence.
Reeder, Mary,	Troy.
	Fourth year, 2.

THIRD YEAR.

Boyles, Kate,	Lawrence.
Brown, Mattie L.,	Piper.
Cowden, Mrs. Florence Gardner,	Ashland.
Lapham, Agnes Olive,	Chanute.
Leverton, Rosa May,	Horton.
Marshall, Elvis Collett,	El Dorado.
Miller, Florence Maude,	Pratt.
McCheyne, Gertrude Muriel,	Lawrence.
Righter, Julia,	Lawrence.
Skofstad, Lottie Blanche,	Lawrence.
Spaulding, Gertrude Mary,	Lawrence.
Starr, Daisy Olive,	Topeka.
Whitaker, Bertha Gertrude,	Buffalo.
Wiedemann, Louise Augusta,	Lawrence.

Third year, 14.

SECOND YEAR.

Beach, Kitlena Maria,	Norfolk.
Branham, Florence,	Colorado Springs, Col.
Clark, Daisy Clarissa,	Minneapolis.
Fisher, Mabel Arnie,	Lawrence.
Langhanke, Otto,	Lawrence.
Lindsay, Mary Abigail,	Belleville.
McShea, Maud Isabelle,	Chapman.
Pampel, Carrie Electa,	Centralia.
Scammon, Angie M.,	Cherokee.
Weber, Sophie,	Lawrence.
Winnek, Alberta,	Leavenworth.
Wood, Edith Flint,	Lawrence.

Second year, 12.

FIRST YEAR.

Ayres, Bessie Perry,	Lawrence.
Baker, Edna Etta,	Solomon City.
Brantner, Lena Leota,	Walalula.
Brown, Jessie,	Piper.
Crandell, Berdena,	Topeka.
Ehrsam, Elsbeth,	Enterprise.
Gilbert, Thomas Howard,	Haviland.
Gildermeister, Etta M.,	Council Grove.
Goode, Mary Lane,	Olathe.
Hothan, Bertha Amelia,	Carbondale.
Ireton, Della,	Lawrence.
Jackman, Linna A.,	Chapman.
Mendenhall, Jessie Frazier,	La Cygne.
Moore, Clara Reding,	Fairfax.
Newcomb, Izora,	Pomona.

Parsons, Anna Esther,	Neosho Falls.
Sherman, Daisy,	Rossville.
Sinnott, Corrairie,	Lawrence.
Snediker, Maude E.,	Hartford.
Taylor, Anna Laura,	Hartford.
Trauger, Cliftone Ruby,	Lawrence.
Williams, Estelle,	Melvorn.
	First year, 22.

Course in Painting.

FOURTH YEAR.

Crew, Mary Katherine,	Haddam.
Riddle, Mary Eleanor,	Lawrence.
	Fourth year, 2.

SECOND YEAR.

Thrasher, Sara Emily,	Lawrence.
	Second year, 1.

FIRST YEAR.

Babcock, Frances,	Lawrence.
Downing, Mabel,	Joplin, Mo.
Lofgren, Hilda Henrietta,	Lawrence.
Safford, Emma Elizabeth,	Augusta.
Welch, Mary,	Burrton.
	First year, 5.

Course in Elocution.

FOURTH YEAR.

Jaedicke, Christine,	Lawrence.
	Fourth year, 1.

FIRST YEAR.

Beveridge, Anna May,	Lawrence.
Boughton, Gertrude Helen,	Lawrence.
Pennel, Myrtle G.,	Atchison.
	First year, 3.

Summary of Enrollment.

	Men.	Women.	Total.
School of Arts.			
Graduates.....	28	10	38
Senior Class.....	43	22	65
Junior Class.....	45	26	71
Sophomore Class.....	62	39	101
Freshman Class.....	74	72	146
First-Year Medical.....	10	.....	10
Special Students.....	37	25	62
Total in School of Arts.....	299	194	493
School of Law.			
Senior Class.....	40	2	42
Junior Class.....	74	.....	74
Special Students.....	5	.....	5
Total in School of Law.....	119	2	121
School of Pharmacy.			
Senior Class.....	23	3	26
Junior Class.....	33	.....	33
Special Students.....	4	.....	4
Total in School of Pharmacy.....	60	3	63
School of Engineering.			
Graduates.....	1	.....	1
Senior Class.....	9	.....	9
Junior Class.....	15	.....	15
Sophomore Class.....	19	.....	19
Freshman Class.....	33	1	34
Special Students.....	13	.....	13
Total in School of Engineering.....	90	1	91
School of Fine Arts.			
Graduates—Music.....	.....	6	6
Fourth Year—Music.....	.....	2	2
Third Year—Music.....	1	13	14
Second Year—Music.....	1	11	12
First Year—Music.....	1	21	22
Fourth Year—Painting.....	.....	2	2
Second Year—Painting.....	.....	1	1
First Year—Painting.....	.....	5	5
Special Students—Piano.....	6	41	47
Special Students—Voice.....	4	14	18
Special Students—Organ.....	.....	2	2
Special Students—Violin.....	6	9	15
Special Students—Oratory.....	2	4	6
Special Students—Painting.....	1	3	4
Total in School of Fine Arts.....	22	134	156
Total enrollment in all schools.....	585	334	919
Names counted twice.....	21	8	29
Total registration.....	569	326	895

In addition, University Extension courses have been conducted by members of the Faculty at the following cities, with the average attendance of citizen students indicated:

	Lecturer.	Attendance.
Independence.....	E. M. Hopkins.....	60
Iola.....	F. H. Hodder.....	60
Kansas City, Kas.....	L. I. Blake.....	425
Lawrence.....	E. Haworth.....	62
Lawrence.....	S. W. Williston.....	62
Leavenworth.....	A. H. Clark.....	81
Kansas City, Mo.....	L. E. Sayre.....	20

Growth of the University

YEAR.	No. of faculty.....	POST-GRADUATES.			SCHOOL OF ARTS.			NORMAL SCHOOL.			LAW SCHOOL.			PHARMACY SCHOOL.		
		Male....	Female.	Total....	Male....	Female.	Total....	Male....	Female.	Total....	Male....	Female.	Total....	Male....	Female.	Total....
1866-67.....	4	.....	.....	.....	0	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
1867-68.....	7	.....	.....	.....	0	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1868-69.....	8	.....	.....	.....	0	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1869-70.....	8	.....	.....	.....	6	11	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
1870-71.....	9	.....	.....	.....	15	30	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
1871-72.....	10	.....	.....	.....	28	28	56	.....	.....	.....	.....	.....	.....	.....	.....	.....
1872-73.....	11	.....	.....	.....	47	26	73	.....	.....	.....	.....	.....	.....	.....	.....	.....
1873-74.....	11	.....	.....	.....	31	27	58	.....	.....	.....	.....	.....	.....	.....	.....	.....
1874-75.....	10	.....	.....	.....	35	30	65	.....	.....	.....	.....	.....	.....	.....	.....	.....
1875-76.....	11	.....	.....	.....	42	30	72	.....	.....	.....	.....	.....	.....	.....	.....	.....
1876-77.....	13	.....	.....	.....	49	31	80	41	79	120	.....	.....	.....	.....	.....	.....
1877-78.....	12	.....	.....	.....	63	47	110	4	8	12	.....	.....	.....	.....	.....	.....
1878-79.....	14	1	2	3	73	46	119	5	11	16	13	0	13	.....	.....	.....
1879-80.....	16	0	2	2	68	46	114	18	42	60	18	0	18	.....	.....	.....
1880-81.....	16	1	0	1	98	58	156	16	22	38	15	0	15	.....	.....	.....
1881-82.....	18	1	2	3	99	49	148	20	33	53	7	0	7	.....	.....	.....
1882-83.....	18	4	2	6	129	79	208	20	22	42	12	0	12	.....	.....	.....
1883-84.....	19	7	3	10	106	59	165	23	41	64	24	0	24	.....	.....	.....
1884-85.....	21	13	8	21	107	42	149	3	7	10	14	0	14	.....	.....	.....
1885-86.....	24	8	6	14	108	49	157	.....	.....	.....	29	0	29	23	0	23
1886-87.....	27	4	10	14	142	60	202	.....	.....	.....	32	0	32	38	2	40
1887-88.....	31	8	5	13	119	50	169	.....	.....	.....	33	0	33	40	2	42
1888-89.....	32	9	4	13	87	31	118	.....	.....	.....	51	0	51	39	4	43
1889-90.....	33	10	7	17	140	59	199	.....	.....	.....	56	0	56	28	3	31
1890-91.....	36	13	12	25	194	70	264	.....	.....	.....	44	1	45	30	3	33
1891-92.....	44	19	10	29	191	92	283	.....	.....	.....	77	1	78	37	4	41
1892-93.....	45	11	9	20	190	122	312	.....	.....	.....	84	1	85	48	5	53
1893-94.....	50	23	10	33	207	125	332	.....	.....	.....	78	1	79	48	6	54
1894-95.....	52	15	6	21	259	167	426	.....	.....	.....	98	1	99	58	8	66
1895-96.....	52	28	10	38	299	194	493	.....	.....	.....	119	2	121	60	3	63

* Normal department discontinued by act of the legislature.

of Kansas, 1866-1896.

ART SCHOOL.			MUSIC SCHOOL.			SCHOOL OF FINE ARTS.			ENGI-NEERING SCHOOL.			PREPARATORY SCHOOL.			NAMES REPEATED, TO BE DEDUCTED.			TOTAL IN ALL SCHOOLS, AFTER DEDUCTIONS.		
Male...	Female.	Total ...	Male...	Female.	Total ...	Male...	Female.	Total ...	Male...	Female.	Total ...	Male...	Female.	Total ...	Male...	Female.	Total ...	Male...	Female.	Total ...
...	29	26	55	...	...	...	29	26	55
...	50	53	103	...	...	...	50	55	105
...	56	60	116	...	...	...	56	66	122
...	66	69	135	...	...	...	72	80	152
...	88	94	182	...	...	...	103	124	227
...	103	106	209	...	...	...	131	134	265
...	94	105	199	...	...	...	141	131	272
...	67	48	115	...	...	...	98	75	173
...	77	52	129	...	...	...	112	82	194
...	75	78	153	...	...	...	117	120	237
...	100	64	164	2	21	23	190	169	359
...	4	15	19	...	...	...	...	...	...	125	128	253	11	22	33	185	176	361
...	5	15	20	...	...	...	...	...	...	143	114	257	11	14	25	229	174	403
...	3	25	28	...	...	...	...	...	...	144	107	251	9	24	33	242	198	440
...	2	30	32	...	...	...	...	...	...	166	111	277	21	31	52	277	190	467
...	2	21	23	...	...	...	...	...	...	141	96	237	8	20	28	262	181	443
...	0	37	37	...	...	...	...	...	...	208	142	350	24	49	73	339	243	582
...	2	36	38	...	...	...	...	...	...	163	105	268	16	32	48	309	212	521
...	59	92	151	...	...	...	...	...	...	144	117	261	63	72	135	277	194	471
0	33	33	4	63	67	...	...	...	...	...	...	90	53	143	4	43	47	258	161	419
3	19	22	16	89	105	...	...	...	...	...	...	99	47	146	18	54	72	316	173	489
1	21	22	6	91	97	...	...	...	...	...	...	110	62	172	11	54	65	306	177	483
0	49	49	8	68	76	...	...	...	...	...	...	146	61	207	8	44	52	332	173	505
9	31	40	5	54	59	...	...	...	...	...	...	90	48	138	6	26	32	332	176	508
3	21	24	13	50	63	...	...	...	...	...	...	27	11	38	8	10	18	316	158	474
...	8	0	1	1	424	206	630
...	12	100	112	88	0	88	...	...	...	12	5	17	438	291	729
...	26	159	185	91	0	91	...	...	...	24	21	45	427	264	691
...	17	153	170	101	0	101	...	...	...	17	8	25	530	345	875
...	32	177	209	100	0	100	...	...	...	...	...	...	569	326	895
...	22	134	156	90	1	91	...	...	...	21	8	29	...	...	...

† At the end of 1890-'91 the Schools of Music and Art were combined.

‡ This year marks the beginning of the discontinuance of preparatory studies.

§ At the end of 1890-'91 the preparatory department was entirely abolished.

|| This year the elementary classes in the Music School were abolished.

Classification by Counties.

Allen	10	Marion	11
Anderson	7	Marshall	14
Atchison	13	McPherson	8
Barton	2	Miami	13
Bourbon	6	Mitchell	8
Brown	26	Montgomery	7
Butler	12	Morris	2
Chase	3	Neosho	11
Chautauqua	1	Nemaha	16
Clark	4	Ness	1
Clay	4	Norton	2
Cloud	1	Osage	16
Crawford	10	Osborne	2
Cherokee	9	Ottawa	8
Coffey	5	Phillips	1
Cowley	9	Pottawatomie	8
Dickinson	20	Pratt	4
Doniphan	5	Reno	8
Douglas*	191	Republic	4
Elk	2	Rice	5
Ellis	4	Riley	7
Finney	7	Rooks	2
Ford	2	Rush	1
Franklin	9	Russell	3
Geary	5	Saline	11
Graham	1	Sedgwick	13
Greenwood	8	Shawnee	38
Harper	6	Sherman	1
Harvey	11	Stafford	2
Jackson	7	Sumner	7
Jefferson	8	Thomas	1
Jewell	3	Trego	3
Johnson	15	Wabaunsee	5
Kiowa	5	Wallace	2
Labette	11	Washington	8
Lane	1	Wichita	1
Leavenworth	26	Wilson	8
Linn	6	Woodson	5
Lyon	17	Wyandotte	17

* A large number of students whose names appear in this catalogue as residents of Douglas county are so catalogued because they temporarily reside in Lawrence for the purpose of attending the University.

Classification by States.

California	1	New Jersey	1
Colorado	3	New York	3
Japan	1	Ohio	1
Kansas	751	Oklahoma territory	2
Iowa	3	Pennsylvania	1
Illinois	3	Tennessee	1
Indiana	3	Vermont	1
Indian territory	1	Washington	1
Missouri	29		

NOTE.—The above classifications by states and counties include only the enrollment in the Schools of Art, Engineering, Law, Pharmacy, and in regular classes in School of Fine Arts.

Roll of Alumni.

School of Arts.

ALUMNI ASSOCIATION.

E. G. BLAIR, '87,	<i>President.</i>
W. C. SPANGLER, '83,	<i>Vice-President.</i>
EDITH CLARKE, '95,	<i>Recording Secretary.</i>
E. F. ENGEL, '92,	<i>Corresponding Secretary.</i>
M. W. STERLING, '83,	<i>Treasurer.</i>
W. H. CARRUTH, '80,	} <i>Executive Committee.</i>
MRS. C. F. STERLING, '83,	
C. F. SCOTT, '81,	
OLIN TEMPLIN, '86,	
MISS KATE RIGGS, '94,	

CLASS OF 1873.

Ralph Collins, A. B.	Flora (Richardson) Colman, A. M.
Murray Harris, A. B.	L. D. L. Tosh, A. M.

CLASS OF 1874.

Ida (Blood) Hasselman, B. S.	Ellis B. Noyes, A. B.
Hannah Oliver, A. M.	

CLASS OF 1875.

Alice G. (Boughton) Blackwelder, A. B.	Frank P. MacLennan, M. S.
Martha R. (Campbell) Hallowell, A. B.	*Frank F. Dinsmoor, A. M.
	W. S. Herrick, B. S.
	Eusebia B. (Mudge) Irish, A. B.
	Kate Stephens, A. M.

CLASS OF 1876.

George F. Gaumer, M. S.	Elmer B. Tucker, A. M.
Mary E. Richardson, B. S.	Henry S. Tremper, A. M.
Willard F. Sergent, A. B.	James A. Wickersham, A. M.
Charles W. Smith, A. M.	Lizzie Ann (Williams) Smith, A. B.

CLASS OF 1877.

Andrew Atchison, A. B.	John Harper Long, S. D. (Tubingen).
Everard Bierer, jr., B. S.	Clara Luella (Morris) Perkins, A. M.
Gertrude Alice (Bullene) Weaver, A. B.	William Osburn, A. M.
	Angelo Cyrus Scott, A. M.
George Will Hapgood, B. S.	Colin Timmons, A. B.
	Carrie M. Watson, A. B.

CLASS OF 1878.

Annie E. (Mozley) Boddington, B. S.	Kate (Williams) Boettcher, A. B.
	DeEtta (Warren) Pillsbury, A. B.

*Deceased.

CLASS OF 1879.

Jessie A. Austin, A. B.	Lizzie J. (Miller) Richards, A. B.
Joseph W. Brigham, B. S.	Alma (Richardson) Wallace, A. B.
William T. Byrd, A. B.	Samuel M. Smith, A. B.
Charles B. Cramer, B. S.	Chandler W. Stephenson, B. S.
James W. Glead, A. M.	Sarah I. (Stevens) Preston, A. B.
Howard H. Jenkins, A. B.	William E. Stevens, A. B.
Eudora A. (Wade) Garrett, M. S.	

CLASS OF 1880.

William H. Carruth, A. M., Ph. D.	Annie O. Gilmore, B. S.
(Harvard).	*James O. Hayes, A. B.
Henry V. Chase, B. S.	*Ariel E. Long, B. S., A. M.
Cora M. (Cherry) Mettner, A. B.	Alfred E. Parker, B. S.
Sarah R. (Dudgeon) Baskerville, A. B.	Franklin Riffle, M. S.
Solon T. Williams, A. B.	

CLASS OF 1881.

Alice Annie (Collier) Rankin, A. B.	Bion Shepard Hutchins, B. S.
Maggie Raymond Eidemiller, A. B.	Mina E. (Marvin) Wilcox, A. M.
Florence E. (Finch) Kelley, A. M.	Alice H. (Peabody) Sears, A. B.
Karl August Floden, A. B.	Don John Rankin, B. S.
Flora M. (Hadley) Little, A. B.	Charles Frederick Scott, M. S.
Erasmus Haworth, M. S., Ph. D.	Edward Gleason Smith, B. S.
(Johns Hopkins).	Pliny Leland Soper, A. M.
Stuart Oliver Henry, A. B.	*Nellie Green (Thacher) Henry, A. B.
George Scott Hopkins, A. M.	Julia M. (Watson) Nicholson, A. B.
*Herbert John Humphrey, A. B.	Charles Green Upton, B. S.
Mary Webb (Woodward) Doran, A. B., B. D.	

CLASS OF 1882.

Ethel Beecher Allen, A. M.	Charles Jefferson Simmons, A. B.
Festus Foster, A. B.	Lindley Murray Spray, A. B.
Richard Foster, M. S.	Mary Elizabeth Wilder, A. B., B. D.
Abner Walter Hill, B. S.	Ellen A. (Woodcock) Upton, A. B.
Edward Clement Meservey, A. B.	Philip Connor Young, B. S.

CLASS OF 1883.

Alla May (Barnes) Foster, B. S.	Edward Arnold Brown, A. M.
Helen W. (Bay) Raymond, A. B.	Edmund Butler, B. S.
Samuel Wheeler Brewster, A. B.	*Charles Curtis Dart, M. S.
Ada Eleanor Briggs, A. M.	Cara E. (Fellows) Sterling, A. B.
Frank Day Hutchings, A. B.	James Gabriel Smith, A. B.
Edward Campbell Little, A. M.	William Cornelius Spangler, B. S.
Mary Catherine McQuiston, A. B.	Miles Wilson Sterling, A. M.
Ann Eliza Murphy, B. S.	John Foster Tucker, A. B.
*Robert Murdagh Osmond, A. B.	Oliver David Walker, B. S., M. D.
Percy Blackstone Russell, A. B.	William Solomon Whirlow, B. S.

CLASS OF 1884.

*Walter Hamlin Britton, A. B.	Kate L. (Ridenour) Lester, A. B.
*Delia Kate Churchill, A. B., B. D.	Albert Stanley Riffle, B. S.
*Mary Agnes Clarke, A. B.	Clara Sciota Gillham, A. B.
*Charles Dickey Dean, B. S.	Mary Green Gilmore, A. B., B. D.
Lewis Lindsay Dyche, A. M., M. S.	Mary (Griffith) Osmond, A. B.
Agnes Emery, A. B.	Merton Joy Keys, B. S.
William Townsend Findley, A. B.	Lucius Henry Leach, A. B.
Mary Elwood (Miller) Barnes, A. B.	Lida Romig, A. B.

Glen Lewis Miller, A. B.	Fred. Asa Stocks, M. S.
William Henry Nevison, A. B.	Addie Mila (Sutliff) Wheeler, A. B.
Cora E. (Pierson) Hopkins, B. S.	George Brown Watson, A. B.
Frank Prentiss, B. S.	Clarence Ernest Wood, A. B.
Alice Lewette Litchfield, A. B., B. D.	

CLASS OF 1885.

Ida Charlotte Barnes, A. B.	James Vance Humphrey, B. S.
Blanche Ketene Bruce, A. B.	William Hamilton Johnson, A. M.
Eldie Franklin Caldwell, A. B.	Victor Linley, A. B.
Samuel Marion Cook, A. B.	William Yoast Morgan, A. B.
Albert Eugene Curdy, A. B.	Lewis Morgan Powell, A. B., M. D.
Frank Sharon Foster, B. S.	John Paul Rote, A. B.
Stephen Ernest Himoe, B. S.	Henry Fremont Smith, B. S.
Nettie A. (Hubbard) Boles, B. S.	William Chase Stevens, M. S.
Harriet Clark Hulick, B. S.	Harriet Tracy Williams, A. M.

CLASS OF 1886.

Arthur L. Adams, B. S.	Laura Edith Lyons, A. B.
Richard Birbeck, B. S.	Julia Georgianna Flinn, A. B.
Samuel Burkholder, A. B.	Solon Thacher Gilmore, A. B.
Joseph Ellsworth Curry, A. B.	Harlin F. Graham, A. M., B. D.
*Harriet R. (Dunn) Smith, B. S.	Claribel (Greenameyer) Hagar, A. B.
Sarah Maria Emery, A. B.	Frank Thompson Oakley, B. S.
Harriett Bliss (Haskell) MacDon-	Louella (Palmer) Graham, A. B.
ald, A. M.	Harry Earle Riggs, A. B.
Rebecca E. (Jacke) Townsend, A. B.	Evelyn (Smith) Miller, A. B.
*William Lane, B. S.	*Mary G. Stimpson, A. B., B. D.
Lena Angie (Van Voorhis) Templin,	Olin Templin, M. S., A. M., B. D.
A. M., B. D.	John Dice McLaren, M. S., B. D.

CLASS OF 1887.

Georgia L. (Bell) Mellon, A. B.	Joseph Barlow Lippincott, B. S.
Edward Giles Blair, A. B., M. D.	Albert Calvin Markley, A. B., B. D.
Cyrus Sykes Crane, A. B.	Robert Lynn McAlpine, B. C. E.
Jeptha Dickey Davis, A. B.	Luella Jane Moore, A. B.
Denton Dunn, A. B.	*Henri Nickel, A. M., B. D.
William Suddards Franklin, M. S.,	Mary Antoinette Rice, A. B., Ph. G.
S. D. (Cornell).	Ella Elson Ropes, A. B.
Grant W. Harrington, A. B., B. D.	Samuel W. Shattuck, jr., B. S.
Claude Britton Highbargin, B. S.	Charles Lincoln Smith, B. S.
Hans Clarence Himoe, A. B.	Harry Denman Smith, A. B.
Wilbur Simpson Jenks, A. B., B. D.	Olive Thompson, B. S.
Cora Lena Kimball, A. B., B. D.	Agnes (Wright) Strickland, B. S.

CLASS OF 1888.

Winfield Scott Allen, A. B., B. D.	Josephine Gilmore, A. B., B. D.
Fred Holmes Bowersock, B. C. E.	Paul Goddard, B. C. E.
William Harvey Brown, B. S.	John Morris Halligan, B. S.
Annis Francena Chaffee, A. B., B. D.	William Edward Higgins, B. S.
Adelia May (Churchill) Sloan,	Owen Cyrus Le Seur, B. C. E.
William Riley Cone, A. B., B. D.	John Adams Prescott, A. B.
A. B., B. D.	William Turner Reed, A. B.
Frank Grant Crowell, A. B.	Joseph Rolston, A. B.
Austin Curtis Cunkle, A. B.	Frank John Savage, B. C. E.
Thomas Francis Doran, A. B.	Clarence E. Springer, B. C. E.
Edward Curtis Franklin, M. S.,	Clara A. (Wilson) Allbright, A. B.
Ph. D. (Johns Hopkins).	

CLASS OF 1889.

Harry Buckingham, B. S.	Asa Dutton Kennedy, B. S.
William Talbot Caywood, A. B.	Mary A. (Newlin) Parmalee, A. B.
Gertrude Anna (Crotty) Davenport, B. S.	Anna Louisa McKinnon, M. S., Ph. D. (Cornell).
*George Lowman Dick, A. B.	Catharine Merrill, A. B.
Susan F. (Eddy) Johnson, A. B.	Flora A. (Newlin) Henshaw, A. B.
Sherman Allen Harvey, A. B.	Sidney Phillips, A. B.
Gertrude Oren Hunnicutt, A. B.	Frank Everett Reed, A. B.
Joseph Jacobs, B. C. E.	Alva Leslie Sloan, B. C. E.
Vernon Lyman Kellogg, M. S.	Lawrence Theodore Smith, B. S.
Edwin Eberhard Squires, B. S.	

CLASS OF 1890.

Walter Root Armstrong, A. B.	Daniel Edward Esterly, B. S.
Emma Bartell, B. S.	Harriette Augusta Fellows, A. M.
Harvey F. M. Bear, B. S.	Nettie Delilah Goodell, B. S.
Schuyler Colfax Brewster, B. S.	Leland DeForest Henshaw, B. C. E.
Neil C. Brooks, A. B.	William Hill, A. B., Ph. D. (Harvard).
Abraham Lincoln Barney, A. B.	*Marcella Howland, A. B.
B. J. Dalton, B. C. E.	Fred. Liddeke, A. B.
Emma G. (Dunn) Wilmoth, B. C.	Charles Stone McFarland, B. C. E.
John Anderson Rush, M. S.	Edward Emery Slosson, M. S.
Frederick Scott Pickering, B. C. E.	Edward Fisk Stimpson, B. S.
Harry Radcliff, B. S.	Helen Binninger Sutliff, A. B.
Florence Reasoner, A. B.	Inez Lorena Taggart, A. M.
William Henry Reynolds, B. S.	Campbell McGhie Watson, A. B.
Richard H. Short, B. C. E.	Park Austin Williamson, B. C. E.

CLASS OF 1891.

Marshall Albert Barber, A. B., A. M. (Harvard).	Frank Hart Olney, A. B.
Justin DeWitt Bowersock, B. S.	Anne Reese Pugh, A. M.
Charles Parsons Chapman, A. B.	Martin Everett Rice, M. S.
James Frank Craig, A. B.	Herbert Fuller Roberts, A. B.
May Ibella (Hair) Culver, A. B.	Robert Anderson Rutledge, B. C. E.
Walter Scott Hayden, A. B.	Frank Charles Shrader, B. S., M. S.
Jessamine Keller Howell, A. M.	Effie June Scott, A. B.
Fred Homer Kellogg, A. B.	William Appleton Snow, M. S.
Malcolm McKinnon, A. B.	Virginia E. Spencer, A. M., B. D.
Irving Haskell Morse, B. S.	Maude Estella Springer, A. B.
Galen Frank Nichols, B. S.	Henry Coffin Fellows, Ph. B. (Earl- ham), A. M.

CLASS OF 1892.

Harold Barnes, A. B.	James Franklin Noble, A. B.
Robert Diamond Brown, A. B.	Dwight Elwood Potter, A. B.
William Wallace Brown, A. B.	James Herbert Sawtell, A. B.
Albert Luther Candy, A. M.	Samuel McClay Simmons, A. B.
Howard Elijah Copper, A. B.	Belle Lundie Spencer, A. B.
Millia Alice Crotty, A. B.	Carrie Taylor Stewart, A. B.
Ova Portis Davis, A. B.	Martha Alice Thompson, A. B.
James Edward Dyche, A. B.	Walter Truitt, A. B.
Elmer Franklin Engel, A. B.	George Olien Virtue, A. B.
Herbert Spencer Hadley, A. B.	Ernest Pratt Wellman, A. B.
Charles H. Johnson, A. B.	Mary Harriet Wellman, A. M.

*Deceased.

CLASS OF 1893.

George Irving Adams, A. B., A. M.	Francis Joseph Lange, A. B.
Cora Elmira Becker, A. B.	Henry Richardson Linville, A. B.
Frank Amanda Lutz, A. B.	Nellie Vie Morris, A. B.
Edith Manley, A. M.	James Owen, A. B.
Josephine Thorndyke Berry, A. B.	William Murray Raymond, A. B.
Nina Claire Bowman, A. B.	William Wilkinson Reno, A. B.
Kate Blair, A. B.	William Halderman Riddle, A. B.
Ermine Cowles Case, A. M.	Henry Clay Riggs, A. B.
Thornton Cooke, A. B.	Ernest Frank Robinson, A. B.
Alberta Linton Corbin, A. B.	Wilbert Davidson Ross, A. M.
Parker William Cress, A. B.	Maggie Sarah Rush, A. B.
William Melville Curry, A. B.	Anna Louisa Schorer, A. B.
Grace Caroline Eaton, A. B.	Adrian Fisher Sherman, A. B.
Henry Fiegenbaum, A. B.	Elmer Eugene Soderstrom, A. B.
Albert Fullerton, A. B.	Daniel Hooker Spencer, A. B.
John Irvin Hamaker, A. B.	Eugene William Springer, A. B.
Ernest Clyde Hickey, A. B.	Chauncey Vaniman, A. B.
Mayo Ellsworth Hickey, A. B.	Russell Ripley Whitman, A. B.
Samuel John Hunter, A. M.	Josie Wilson, A. B.
Edna Jones, A. B.	Jacob Good Wine, A. B.
Raphael Dorman O'Leary, A. B.	

CLASS OF 1894.

James Edward Baker, A. B.	Archie Hogg, A. B.
Mary Wager Barkley, A. B.	Frederick Noble Howell, A. B.
Rollin Elliott Blackman, A. B.	Henry Otto Kruse, A. B.
Schuyler Colfax Bloss, A. B.	Lloyd A. Lowther, A. B.
Clara Sears Bosworth, A. B.	James Vance May, A. B.
Fred Erskine Buchan, A. B.	Stella May Miller, A. B.
Thomas Walter Butcher, A. B.	Frank Horace Moore, A. B.
Eli Cann, A. B.	Rose Ruth Morgan, A. B.
John Felix Carlson, A. B.	John Mustard, A. B.
Winifred Grace Churchill, A. B.	*Edward Isaac O'Bryon, A. B.
Arthur Linton Corbin, A. B.	Ezra W. Palmer, A. B.
Alvan Harvey Couch, A. B.	Wm. Henry Harrison Piatt, A. B.
MacGregor Douglas, A. B.	Sherman Ploughe, A. B.
William Cornelius Fogle, A. B.	Laura Radford, A. B.
Albert Osburn Garrett, A. B.	Kate Louise Riggs, A. B.
Charles Sumner Griffin, A. B.	Irvin R. Rothrock, A. B., A. M.
Eleanora Harris, A. B.	George Alex. Schumaker, A. B.
Edward Harvey, A. B.	*Lorin Beecher Sears, A. B.
Mary Kelsey Haskell, A. B.	May Hotchkiss Spencer, A. B.
Nelle Susannah Hawkins, A. B.	Nancy Clarinda Spencer, A. B.
Burrit Howell Hill, A. B.	Luther Elias Thrasher, A. B.
Robert Lee Hoff, A. B.	Henry Dent Wilson, A. B.

CLASS OF 1895.

Maurice Le Roy Alden, A. B.	Sheffield Ingalls, A. B.
Kate Anderson, A. B.	Carl Edward Kimpton, A. B.
Anna Burnett Banks, A. B.	Effie Loader, A. B.
Frank Clarence Bowker, A. B.	Margaret Menet, A. B.
Silas Scholl Brown, A. B.	J. Frank Messenger, A. B.
Clarence Alexander Burney, A. B.	Harrison William Miller, A. B.
Fred Cahill, A. B.	Clyde Winwood Miller, A. B.
Hannah May Carpenter, A. B.	John DeMott Miller, A. B.

*Deceased.

Edith M. Clarke, A. B.	Luella C. Gladys Moore, A. B.
John Daniel Clear, A. B.	William Moore, A. B.
Ralph Waldo Cone, A. B.	Stanton Olinger, A. B.
Walter Richard Crane, A. B.	Daisy Orton, A. B.
William Christian Dick, A. B.	Byron Lee Pampel, A. B.
Breese Morse Dickinson, A. B.	Florence Emma Parrott, A. B.
John Addison Edwards, A. B.	Bertha Peterson, A. B.
Franc R. (Fellows) Stimpson, A. B.	Elmer Ellsworth Rush, A. B.
John Austin Frazier, A. B.	Madge Schaum, A. B.
Lillie May Freeman, A. B.	Theophilus H. Scheffer, A. B.
Ella Funston, A. B.	Mabel Scott, A. B.
Wilbur Ludington Gardner, A. B.	Etoile Simons, A. B.
Eva Clarissa Gill, A. B.	Lucinda Smith, A. B.
Edward T. Hackney, A. B.	Clarence Talbot Southwick, A. B.
John Galentine Hall, A. B.	Mary Marena Spencer, A. B.
John Lyle Harrington, A. B.	Sadie Melinda Stone, A. B.
Edith Kelsey Haskell, A. B.	Peter J. Wedel, A. B.
Matilda Augusta Henrichs, A. B.	Samuel A. M. Young, A. B.
Adelia Alice Humphrey, A. B.	Augustus P. Zeller, A. B.

School of Engineering.

(This school was organized in 1891. The graduates in the engineering courses preceding that date are repeated here.)

- Class of 1873.—Murray Harris, A. B.
 Class of 1874.—Ellis B. Noyes, A. B.
 Class of 1875.—Frank P. MacLennan, M. S.
 Class of 1877.—George Will Hapgood, B. S.
 Class of 1878.—Hugh Tudor Richards, C. E.
 Class of 1880.—Franklin Riffle, M. S.
 Class of 1881.—Edward Gleason Smith, B. S.
 Class of 1883.—Robert Murdaugh Osmond,* B. S.
 Class of 1884.—Albert Stanley Riffle, B. S.
 Class of 1885.—Henry Fremont Smith, B. S.
 Class of 1886.—Arthur L. Adams, B. S., Richard Birbeck, B. S., Frank Thompson Oakley, B. S.
 Class of 1887.—Robert Lynn McAlpine, B. C. E.
 Class of 1888.—Fred Holmes Bowersock, B. C. E., Paul Goddard, B. C. E., Owen Cyrus Le Seur, B. C. E., Frank John Savage, B. C. E., Clarence Elestus Springer, B. C. E.
 Class of 1889.—Joseph Jacobs, B. C. E., Alva Leslie Sloan, B. C. E.
 Class of 1890.—B. J. Dalton, B. C. E., Frederick Scott Pickering, B. C. E., Harry Radcliff, B. S., William Henry Reynolds, B. S., Richard H. Short, B. C. E., Leland DeForest Henshaw, B. C. E., Charles Stone McFarland, B. C. E., Edward Fisk Stimpson, B. S., Park Austin Williamson, B. C. E.

CLASS OF 1891.

Robert Anderson Rutledge, B. C. E.

CLASS OF 1892.

Eugene Wilson Caldwell, B. S. Charles Warnock Frederick, B. S.
 Arthur Osborne Ridgeway, B. S. John Mason Robinson, B. S.

*Deceased.

CLASS OF 1893.

Dennett Elijah Babbitt, B. S.	Ernest Blaker, B. S.
William Lester Brayton, B. S.	John Edward Curry, M. S., C. E.
Frank Ringer, B. S.	Roy Roscoe Rodgers, B. S.
Dana Templin, B. S., M. S.	

CLASS OF 1894.

Richard William Carter, B. S.	William Henry Kutz, B. S.
Lloyd Duffee, B. S.	Alfred Douglass Ludlow, B. S.
Herbert Henry Johnson, B. S.	Alanson Niles Topping, B. S.

CLASS OF 1895.

John Penn Cracraft, B. S.	*Charley Jacob Kitzmiller, B. S.
Arthur Ulysses Craig, B. S.	John Alouis Lahmer, B. S.
Arthur William Cunningham, B. S.	Hugh Graham Landis, B. S.
John Lyle Harrington, B. S., C. E.	Ned Ernest Newton, B. S.
James Judson Harding, B. S.	George Meade Soxman, B. S.
Geo. Thomas Herrington, B. S.	Orah Kilburn Williamson, B. S.
James Cezanne Kelsey, B. S.	Henry Jay Withington, B. S.

Normal Department.†

CLASS OF 1877.

Alla M. (Barnes) Foster.	Lizzie A. Stanley.
Mary A. Brannen.	Emeline B. Upton.
N. Elizabeth Burbank.	Anna L. Varney.
Mary R. (Dillon) Miller.	Eudora (Wade) Garrett.
Karl A. Floden.	Charlotte C. (Warren) Cahlan.
Henry S. Harvey.	Almira Wood.

Mary E. (Murphy) Beckey.

CLASS OF 1879.

Ella Pearson.	Alma (Richardson) Wallace, B. A.
Frank Prentiss, B. S., B. D.	Samuel M. Smith, B. A.

CLASS OF 1880.

Jessie A. Austin, B. A.	Ellen Hill.
Helen W. (Bay) Raymond, B. A.	Bion S. Hutchins, B. A.
Henry V. Chase, B. S.	Alfred E. Parker, B. S.
Abbie Coltrane.	Carrie M. Watson, B. A.

CLASS OF 1881.

Caroline (Bauman) Spangler.	Charles Dana Hawkins.
Lizzie Flora Farr.	Rosetta Haworth.
*Mary E. (Gamble) Presby.	Anna Lydia Moore.
Charles Green Upton, B. S.	

CLASS OF 1882.

Ella Kempthorne.	Emery Frederick Stanley.
Mary Belle Parker.	Lindley Murray Spray, B. A.

CLASS OF 1883.

Frank Howard Clark, B. D.	Mina Elizabeth (Marvin) Wilcox,
Ella (Coltrane) Spray.	M. A., B. D.

*Deceased.

†This department was closed by act of the legislature, in 1885.

Mary Ann Davis, B. D.	Glen Lewis Miller, A. B., B. D.
Eveoline Gano, B. D.	Ann Eliza Murphy, B. S., B. D.
Chloe (Haworth) Coyle, B. D.	George Earle Rose.
Edward C. Little, B. A., B. D.	John Lincoln Shearer, B. D.
William S. Whirlow, B. S., B. D.	

CLASS OF 1884.

Phebe (Ashley) Clark, B. D.	*Emma Jane (Kempthorne) Scott.
Eugene L. Cowdrick, B. D.	Minnie Clark Jay, B. D.
Eva Halstead.	Charles Samuel Metcalf.
Margaret C. (Hemphil) Smith, B. D.	Lulu (Miller) Smyth.
Cora Viola Henshaw.	Elma Newby.
William H. Johnson, A. M., B. D.	Augusta Hannah Pierson.
Nettie Angeline (Hubbard) Boles, B. S., B. D.	Olin Templin, A. M., M. S.

CLASS OF 1885.

Harriet Alice Black.	Harriet Clark Hulick, B. S., B. D.
Ada Eleanor Briggs, A. M., B. D.	Anna Elizabeth Loy.
Blanche Ketene Bruce, A. B., B. D.	Hiram Barton Martin, B. D.
Samuel Marion Cook, A. B., B. D.	Matthew Edgar Pierson.
Jennie Divelbess.	John Paul Rote, A. B., B. D.
*Flora Belle Eddy.	Martha Alice Thompson, B. D.
Millard Lincoln Field, B. D.	Harriet Tracy Williams, A. B., B. D.
Clara (Greenameyer) Hagar, B. D.	Ida May (Wade) Starr.

School of Law.

ALUMNI ASSOCIATION.

WILLIAM B. BROWNELL, '86,	<i>President.</i>
JOHN H. ALBACH, '86,	<i>Vice-President.</i>
E. E. HOPKINS, '93,	<i>Secretary and Treasurer.</i>

CLASS OF 1880.

George M. Degroff, LL. B.	Will J. Neill, LL. B.
Rufus A. French, LL. B.	Lucius H. Perkins, LL. B.
Thomas H. Kennedy, LL. B.	Samuel C. Usher, LL. B.
Frank E. Larimer, LL. B.	George W. W. Yates, LL. B.

CLASS OF 1881.

Leo James Barr, LL. B.	Arthur Lewis Hayes, LL. B.
Walter Mackey Duff, LL. B.	Benjamin Franklin Surface, LL. B.

CLASS OF 1882.

Arthur Cornforth, LL. B.	Charles Augustus Haskins, LL. B.
Joseph Mallen Gray, LL. B.	*John Thomas Harlow, LL. B.
Thomas Franklin	Richmond, LL. B.

CLASS OF 1883.

Wm. Leonard Porter Burney, LL. B.	*Edwin Delmar Goodin, LL. B.
Ernest James Cooper, LL. B.	Numa Wesley Wells, LL. B.

CLASS OF 1884.

Leander L. Davis, LL. B.	Francis Wylie Marlin, LL. B.
Frank Exline, LL. B.	Harry Miller Marquis, LL. B.
Charles Frederick Foley, LL. B.	Ezra McCord Shinkle, LL. B.
James F. Major, LL. B.	*Howard Trego Smith, LL. B.

*Deceased.

CLASS OF 1885.

Van Fremont Boor, LL. B.	Isaac Albert Rigby, LL. B.
James N. Davis, LL. B.	William Cornelius Spangler, LL. B.
James Alex. Hutcheson, LL. B.	Joseph Richard Turner, LL. B.
Joshua Wilson, LL. B.	

CLASS OF 1886.

John Henry Albach, LL. B.	Frank Day Hutchings, A. B., LL. B.
Harry Ballinger, LL. B.	Edward C. Little, A. B., LL. B.
William B. Brownell, A. B., LL. B.	Scott Mitchell, LL. B.
John William Hall, LL. B.	Walter Cyrenus Stevens, LL. B.
Elmer Ellsworth Hartley, LL. B.	Walter Winfield Scott, LL. B.
James Booth Van Vliet, LL. B.	Benjamin Franklin Talbott, LL. B.

CLASS OF 1887.

Isaac Francis Bradley, LL. B.	Benjamin F. Hutchins, LL. B.
Robert Woods Blair, LL. B.	William Jay Jackson, LL. B.
*Dan Andrew Crew, LL. B.	John Groff Miller, LL. B.
Joseph Thomas Dickinson, LL. B.	Samuel Wallace Moore, LL. B.
George Wendle Frolick, LL. B.	Frederick Shearer Pentzer, LL. B.
James Buchanan Harris, LL. B.	John Sullivan, LL. B.

CLASS OF 1888.

Alfred Fidler, LL. B.	Sterling Price King, LL. B.
Solon Thacher Gilmore, A. B., LL. B.	David Emory Palmer, LL. B.
Chas. Ellsworth Harbaugh, LL. B.	Howard Allen Pears, LL. B.
William Anthony Jackson, LL. B.	Emery Scott Rice, LL. B.
Benjamin Jacobs, LL. B.	John William Roberts, LL. B.
William Staples Wolley, LL. B.	

CLASS OF 1889.

Samuel D. Bishop, LL. B.	Richard Scott Horton, LL. B.
Edwin S. Earhart, LL. B.	John Wilbur McIlravy, LL. B.
Cornelius Martin Enns, LL. B.	Alexander Clark Mitchell, LL. B.
Willis Harry Finfrock, LL. B.	William Thomas Nelson, LL. B.
Lee Moore Gray, LL. B.	Thomas Allen Pollock, LL. B.
Grant W. Harrington, A. B., LL. B.	Jesse Clayton Shuman, LL. B.
Bruno Hobbs, LL. B.	Lee C. Spooner, LL. B.
John Martin Wayde, LL. B.	Louis Abyram Stebbins, LL. B.

CLASS OF 1890.

Earnest L. Ackley, LL. B.	Thomas D. Leib, LL. B.
Cranston W. Butterworth, LL. B.	Joseph G. Littick, LL. B.
Albert Caughey, LL. B.	Daniel Mallison, LL. B.
Daniel J. Coy, LL. B.	Frank D. Merriam, LL. B.
Porter Edminster, LL. B.	James Nichols, LL. B.
Thomas J. Flannelly, LL. B.	Louis C. Poehler, LL. B.
Charles Farrow, LL. B.	Frank M. Power, LL. B.
William Henry Herdman, LL. B.	William W. Russ, LL. B.
Robert E. Lee Herdman, LL. B.	William H. Sears, LL. B.
Howard M. Hill, LL. B.	Percy C. Simons, LL. B.
Russell Whitelaw Houk, LL. B.	Charles W. Wallis, LL. B.
Wallace W. Lawton, LL. B.	Seba C. Westcott, LL. B.
Alva L. Wilmoth, LL. B.	

CLASS OF 1891.

John Hames Boucher, LL. B.	Brett Wendell Jaquith, LL. B.
Clifford D. Bower, LL. B.	David Lewis Jones, LL. B.

Ella White Brown, LL. B.	Preston Rufus King, LL. B.
Austin Curtis Cunkle, LL. B.	Judah Lincoln Mack, LL. B.
Edward C. Dowling, LL. B.	John Paxton McLaughlin, LL. B.
Edward Clingan Finney, LL. B.	John Wesley Mertz, LL. B.
Thomas Anderson Finical, LL. B.	William Ludovic Palm, LL. B.
James Ammie Flint, LL. B.	*Walter Herbert Starkey, LL. B.
William Anderson Foster, LL. B.	John Stowell, LL. B.
Alvah John Graham, LL. B.	William Bolden Townsend, LL. B.
Francisco Antonio Gutierrez, LL. B.	Arthur Gordon Webster, LL. B.

CLASS OF 1892.

Herbert L. Armstrong, LL. B.	John Jackson Jones, LL. B.
Elmer Seward Bessey, LL. B.	Orin Jacob Lamm, LL. B.
Jarvis Amos Blume, LL. B.	Ira Holmes Lookabaugh, LL. B.
Eldie Franklin Caldwell, LL. B.	Andrew Jackson May, LL. B.
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Joseph Shaffer, LL. D.	Wm. H. Harrison Sproul, LL.B.
John Strosnider, LL. B.	Ernest Pratt Wellman, LL. B.

CLASS OF 1895.

Edgar Bennett, LL. B.	Corydon Endsley Lindley, LL. B.
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John Francis Kerrigan, LL. B.	Adolph W. Wulfekuhler, LL. B.
Frank Fenimore Lamb, LL. B.	Louis Herman Wulfekuhler, LL. B.
	William H. Wynn, jr., LL. B.

School of Pharmacy.

CLASS OF 1886.

Harry Legate Raymond, Ph. G.	Carl Lewis Wyler, Ph. G.
Edward Bayless Fox, Ph. G.	

CLASS OF 1887.

Harry Perry Applebaugh, Ph. G.	Samuel Watson Lindsley, Ph. G.
Charles C. Dailey, Ph. G.	Martin O'Donnell, Ph. G.
William Scott Dick, Ph. G.	Frank Prentiss, B. S., Ph. G.
*John Henry Deford, Ph. G.	Charles Loyal Sexton, Ph. G.
Claude Britton Highbargin, Ph. G.	Andrew Jackson Smith, Ph. G.
Clarence Remsen Hoadley, Ph. G.	Thomas Herbert Wood, Ph. G.
Corydon Endsley Lindsley, Ph. G.	Albert F. Wulfekuhler, Ph. G.

CLASS OF 1888.

Frank Lincoln Abbey, Ph. G.	John Williams Root, Ph. G.
William Clarence Albach, Ph. G.	Charles Borden Spencer, Ph. G.
Herbert M. Herrold, Ph. G.	Arthur Ellsworth Topping, Ph. G.
George McLaren.	Robert James McClure, Ph. G.
Ernest R. Rankin, Ph. G.	George Francis Weida, Ph. D.
Mary Antoinette Rice, Ph. G., A. B.	(Johns Hopkins).

CLASS OF 1889.

Bradford Loring Hill, Ph. G.	Edward William Morris, Ph. G.
Willard B. Hilton, Ph. G.	Robert Parker, Ph. G.
Ernest Himoe, Ph. G.	John Nesbitt Scott, Ph. G.
Denton Hogeboom, Ph. G.	Loren Wade Snapp, Ph. G.
George Frederic Kaiser, Ph. G.	Alfred T. Webb, Ph. G.

CLASS OF 1890.

Volney T. Boaz, Ph. G.	Samuel J. Kelly, Ph. G.
*John D. Claassen, Ph. G.	Carl Phillips, Ph. G.
Benjamin F. Fiegenbaum, Ph. G.	Arthur W. Thomas, Ph. G.

CLASS OF 1891.

Wilbur Stanton Amos.	John H. Kennedy, Ph. G.
William Pierson Brown, Ph. G.	Peter Muller.
Leroy S. Hackett, Ph. G.	Robert Pollock, Ph. G.
Florence Luella Hedge, Ph. G.	William Patterson Pugh, Ph. G.
James Wilson Kennerley, Ph. G.	Homer Albert White, Ph. G.

CLASS OF 1892.

Maude Beatrice Allen.	Clarence Erwin McClung, Ph. G.
Robert Combs, Ph. C.	Marlin Samuel McCreight, Ph. G.
Achille DeDonder, Ph. G.	Carrie Priestly.
Fred. LaPorte Diggs, Ph. G.	Victor Alexander Rankin, Ph. G.
Alexander J. Eicholtz, Ph. G.	Herbert John Rankin, Ph. G.
John Edwards Youngberg, Ph. G.	

CLASS OF 1893.

DeForest Baker, Ph. G.	Alfred Poehler Rudiger, Ph. G.
Louis House Bergman, Ph. G.	Nelson Hughes Seiler, Ph. G.
Harold Day, Ph. G.	Ellsworth Frank Wallack, Ph. G.
Calvin Delbert Lieurance, Ph. G.	Robert Aeneas Watt, Ph. G.
George Benjamin Norberg, Ph. G.	Walter Everett Wilson, Ph. G.
Homer Clifton Oatman, Ph. G.	Alfred Youngberg, Ph. G.

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Perry Bigelow Barber, Ph. G.	Austa Adele Northrup, Ph. G.
William Marshall Clark, Ph. G.	James Edgar Northrup, Ph. G.
Henry Ernst, Ph. G.	Fred. C. Oehler, Ph. G.
George Ervin Haller, Ph. G.	Orin Herbert Parker, Ph. G.
Herbert Edwin Jenkins, Ph. G.	Earl Ira Steinberger, Ph. G.
Charles Edwin Joslin, Ph. G.	William Orange Strother, Ph. G.
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Brinton D. Woodward, Ph. G.	

CLASS OF 1895.

Thomas Bailey, Ph. C.	Edward Ernest Cowman, Ph. C.
William Francis Bowen, Ph. C.	William Barnard Kelling, Ph. C.
Albert Burnam Clarke, Ph. C.	Edward Francis Schopflin, Ph. C.
Robert Edgar Stewart, Ph. C.	

*Deceased.

School of Fine Arts.

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Ella Kempthorne.

CLASS OF 1883.

Lillian G. (Bell) Mellon.

Susa Hubbard Breck.

CLASS OF 1887.

Mabel Edith (Gore) Glead, M. G., Mus. B.

CLASS OF 1888.

Bertha Nellie Atwood, M. G.

Alice Haywood Ropes, M. G.

CLASS OF 1889.

John Crogan Manning, M. G.

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Mrs. Ida Burr Bell, Mus. B.

Manie Almerna Johnston, Mus. B.

E. Geneve Lichtenwalter, Mus. B.

Daisy Orton, Mus. B.

Jennie M. Weller, Mus. B.

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Lillie May Hinman, M. G.

Nina Jacqueline Taggart, M. G.

Alice Wynn, M. G.

Helen (Wynne) Springer, M. G.

CLASS OF 1893.

Lillie May Hinman, Mus. B.

Sarah (Kaufman), Mus. B.

Louise Tunncliffe Smith, Mus. B.

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Jessie Hood, M. G.

Juliet (Titsworth) Curry, Mus. B.

Mary Norris Berry, Mus. B.

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Olive Pierson, B. P.

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Harriet Mary Gressinger, Mus. B.

Sarah Elizabeth Lingard, Mus. B.

Abbie Merriman Noyes, Mus. B.

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Kansas City Mail.....	Kansas City, Kas.
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Kansas City World.....	Kansas City, Mo.
Lawrence Daily Journal.....	Lawrence.
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Salina Daily Republican-Journal.....	Salina.
Topeka State Journal.....	Topeka.

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Anthony Republican	Anthony.
Athenæum (Prof. A. M. Wilcox).....	London.
Baxter Springs News.....	Baxter Springs.
Beloit Gazette	Beloit.
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Blue Rapids Times.....	Blue Rapids.
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Christian Register.....	Boston, Mass.
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Dickinson County News.....	Abilene.
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El Dorado Republican	El Dorado.
Ellinwood Advocate.....	Ellinwood.
Enterprise Journal.....	Enterprise.
Eudora News	Eudora.
Eureka Democratic Messenger.....	Eureka.
Galena Times.....	Galena.
Garnett Journal.....	Garnett.
Garnett Republican-Plaindealer.....	Garnett.
Girard Weekly World	Girard.
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Iola Register.....	Iola.

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Ponca City Courier.....	Ponca City, Ok.
Revue Critique (Prof. A. G. Canfield).....	Paris.
Rice County Eagle.....	Lyons.
Rooks County Record.....	Stockton.
Russell Record.....	Russell.
Salina Weekly Union.....	Salina.
South Kansas Tribune.....	Independence.
Star and Kansan.....	Independence.
Topeka Mail and Kansas Breeze.....	Topeka.
Torch of Liberty.....	Mound City.
Tribune.....	Holton.
United Presbyterian.....	Pittsburg, Pa.
Wamego Times.....	Wamego.
Weekly Republican-Traveler.....	Arkansas City.
Western Spirit.....	Paola.
Westmoreland Recorder.....	Westmoreland.
Wichita Eagle.....	Wichita.
Wilson County Citizen.....	Fredonia.
Wyandotte Herald.....	Kansas City.

MONTHLIES.

Advocate of Peace.....	Boston.
Johns Hopkins University Circulars.....	Baltimore, Md.
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Meck's Bulletin.....	New York.
Musical Record.....	Boston, Mass.
Myers Bros.' Druggist.....	St. Louis, Mo.
National Druggist.....	St. Louis, Mo.
New England Druggist.....	Boston, Mass.
Ohio Meteorological Bureau, Report of.....	Columbus, Ohio.
Omaha Druggist.....	Omaha.
Pharmaceutical Era.....	Detroit, Mich.
Pharmaceutische Rundschau.....	New York.

Revue d' Histoire Litteraire (Prof. A. G. Canfield).....	Paris.
Rocky Mountain Druggist	Denver.
Western Druggist.....	Chicago.
Western Drug Record	Kansas City, Mo.
Western School Journal.....	Topeka.

QUARTERLIES.

Acta Mathematica (Prof. H. B. Newson)	Stockholm, Sweden.
Annals of Mathematics.....	Washington, D. C.

DEPARTMENT OF CIVIL ENGINEERING.

Charles Delo, Cedar Rapids, Iowa :	Blue prints of standard railway plans.
Franklin Riffle, Oakland, Cal. :	Photographs of water-pipe line at Portland, Ore.
R. L. McAlpine, Kansas City, Mo. :	Photographs of government surveying parties.
C. E. Springer, Tacoma, Wash. :	Instruction to railway accountants.
M. W. Curtiss, Pittsburgh Bridge Co., Chicago, Ill. :	Illustrations of Halstead st. lift bridge.
Thompson Meter Co., N. Y. :	One $\frac{5}{8}$ -inch sectional meter.
Hersey Manufacturing Co., Boston :	One $\frac{5}{8}$ -inch Hersey disc meter and connections.
Kansas Water and Light Co. :	One Worthington meter, one Hersey meter, one Niagara meter.

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Compliments of

Chancellor Snow.



F. E. MARCY ENG.

SNOW HALL.

MAIN BUILDING.

SPOONER LIBRARY.
PHYSICS BUILDING.

UNIVERSITY OF KANSAS.

LIBRARY
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THIRTY-FIRST ANNUAL CATALOGUE

OF THE

UNIVERSITY OF KANSAS

FOR THE YEAR 1896-'97.

TOPEKA:
PRESS OF THE KANSAS STATE PRINTING COMPANY.
J. K. HUDSON, State Printer.
1897.

1897.														1898.													
JANUARY.							JULY.							JANUARY.													
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Announcements.

For 1897.

- Jan. 4, Monday — Christmas recess ends.
Jan. 25 to 29, Monday to Friday, inclusive — Semiannual examinations.
Feb. 1, Monday — Second term begins.
March 31, Wednesday — First half term ends.
April 1 to 5, Thursday, Friday, and Monday — Spring recess.
April 6, Tuesday — Second half term begins.
May 31 to June 4, Monday to Friday, inclusive — Annual examinations.
June 3, Thursday — Commencement concert, by Music department, School of Fine Arts.
June 6, Sunday, 8 P. M. — Baccalaureate sermon.
June 7, Monday, 8 P. M. — Phi Beta Kappa address.
June 8, Tuesday, 8 P. M. — Annual Alumni address.
June 9, Wednesday, 10:30 A. M. — Commencement exercises.

For 1897-'98.

- Sept. 8, Wednesday — First term begins.
Sept. 8, 9, Wednesday and Thursday — Examination of candidates for admission, and presentation of certificates from high schools, academies, and other institutions.
Sept. 10, Friday — General assembly of students, and annual address in University Hall, at 10 A. M.
Nov. 11, Thursday — Second half term begins.
Nov. 25, 26, and 29, Thursday, Friday, and Monday — Thanksgiving recess.
Dec. 14, Tuesday, 8 P. M. — Christmas concert, by Music department, School of Fine Arts.
(Christmas recess, Saturday, December 18, to Monday, January 3, inclusive.)
Jan. 3, Monday — Christmas recess ends.
Jan. 24 to 28, Monday to Friday, inclusive — Semiannual examinations.
Jan. 31, Monday — Second term begins.
Mar. 30, Wednesday — First half term ends.
March 31 to April 4, Thursday, Friday, and Monday — Spring recess.
April 5, Tuesday — Second half term begins.
May 30 to June 3, Monday to Friday, inclusive — Annual examinations.
June 2, Thursday — Commencement concert, by Music department, School of Fine Arts.
June 5, Sunday, 8 P. M. — Baccalaureate sermon.
June 7, Tuesday, 8 P. M. — Annual Alumni address.
June 8, Wednesday, 10 A. M. — Commencement exercises.

Organization and Government.

By act of Congress, approved January 29, 1861, 72 sections of land were set apart and reserved for the use and support of a State University in Kansas. The state accepted the trust, and in an act approved March 1, 1864, provided as follows :

“SECTION 1. There shall be established in this state, at or near the city of Lawrence, in the county of Douglas, on the grounds secured for that purpose pursuant to the act entitled ‘An act to locate the State University,’ passed February 20, 1863, an institution of learning, under the name of THE UNIVERSITY OF KANSAS.

“SEC. 2. The object of the University shall be to provide the inhabitants of this state with the means of acquiring a thorough knowledge of the various branches of literature, science, and the arts.”

The legislature of the state made further provision for the University in an act approved February 25, 1889, and entitled “An act to provide for the government and maintenance of the University of Kansas.” This act, repealing all former legislation bearing upon the same topics, continues the name of THE UNIVERSITY OF KANSAS, and its location at LAWRENCE, in DOUGLAS COUNTY. It further enacts —

That the University shall provide the means of acquiring a general and thorough knowledge in literature, the sciences, and the arts; and also provide students who desire to pursue special studies with the most approved appliances, authorities and instruction to insure the greatest knowledge and research in any special branch of learning connected with university education; that it shall consist of three departments: (1) A department of the literatures; (2) A department of the sciences; (3) A department of the arts; and that within these three departments there shall be established such schools as the Regents, in connection with the Faculty, may order. The same law further enacts that the government of the University shall be vested in a board of seven Regents, six of whom shall be appointed by the governor and confirmed by the senate, and whose term of office shall be four years; that the Board of Regents shall be a body corporate, under the name of “The Regents of the University of Kansas,” and

as such may sue and be sued, make contracts, and hold and transfer property, both real and personal, for the University.

The Board of Regents is also invested with the power to elect a Chancellor, who shall be the chief officer of the University, and president of the Board of Regents with the full power of a Regent; to appoint professors, assistants, tutors; to increase and diminish their numbers as the interest of the University may require; to employ a janitor, librarian, and such other officers and employees as in their judgment the needs of the University require.

The Board is also empowered to confer such degrees and grant such diplomas as are usually conferred and granted by other institutions of learning.

Board of Regents.

CHANCELLOR F. H. SNOW	Lawrence.		
HON. C. F. SCOTT.....	Iola.....	Term expires	1899
HON. J. W. FORNEY.....	Belle Plaine.....	"	" 1899
HON. F. G. CROWELL	Atchison	"	" 1899
HON. WM. ROGERS.	Washington.....	"	" 1901
HON. J. P. SAMS.....	Seneca.....	"	" 1901
HON. H. S. CLARKE	Lawrence	"	" 1901

Officers of the Board.

F. H. SNOW	<i>President.</i>
J. P. SAMS.....	<i>Vice-President.</i>
C. F. SCOTT.....	<i>Secretary.</i>

Committees of the Board.

Instruction:

J. W. FORNEY.
C. F. SCOTT.
F. G. CROWELL.

Library and Apparatus:

C. F. SCOTT.
H. S. CLARKE.
F. G. CROWELL.

Finance:

J. P. SAMS.
J. W. FORNEY.
WM. ROGERS.

Buildings, Grounds, and Supplies:

WM. ROGERS.
H. S. CLARKE.
F. G. CROWELL.

University Lands and Endowments:

H. S. CLARKE.
J. P. SAMS.
J. W. FORNEY.

Reports and Publications:

J. W. FORNEY.
C. F. SCOTT.
H. S. CLARKE.

Auditing of Accounts:

F. G. CROWELL.
J. P. SAMS.
WM. ROGERS.

Officers of the University.

F. H. SNOW	<i>Chancellor.</i>
R. K. MOODY.....	<i>Secretary, Treasurer, and Purchasing Agent.</i>
E. F. ENGEL.....	<i>Registrar.</i>
C. H. GOODRICH.....	<i>General Agent for University Lands.</i>
T. C. WHITE	<i>Superintendent of Buildings and Grounds.</i>

Board of Instruction.

NOTE.—The names of the members of the Faculties are arranged in five classes — Professors, Associate Professors, Assistants, Lecturers, and Instructors; and the place of each in its own class is determined by seniority of appointment.

FRANCIS HUNTINGTON SNOW, PH. D. (*Williams*), LL. D. (*Princeton*),
PRESIDENT.

Professor of Botany and Entomology, and Director of the Museum
of Natural History.

EPHRAIM MILLER, PH. D. (*Allegheny*),
Dean of School of Arts; and Professor of Mathematics and Astronomy.

JAMES WOODS GREEN, A. M. (*Williams*),
Dean of School of Law; and Professor of Constitutional Law, Contracts, Commercial Paper, Insurance, and Corporations.

WILLIAM HERBERT CARRUTH, A. M. (*Kansas University*), PH. D. (*Harvard*), Professor of German Language and Literature.

FRANK OLIN MARVIN, A. M. (*Allegheny*),
Dean of School of Engineering; and Professor of Civil Engineering.

EDGAR HENRY SUMMERFIELD BAILEY, PH. B. (*Yale*), PH. D. (*Illinois Wesleyan*), Professor of Chemistry and Metallurgy.

JAMES WILLIS GLEED, A. M. (*Kansas University*),
Professor of Law of Real Property.

ALEXANDER MARTIN WILCOX, PH. D. (*Yale*),
Professor of Greek Language and Literature.

LUCIUS ELMER SAYRE, PH. M. (*Philadelphia*), B. S. (*Michigan University*),
Dean of School of Pharmacy; and Professor of Pharmacy.

ARTHUR GRAVES CANFIELD, A. M. (*Williams*),
Professor of French Language and Literature.

LUCIEN IRA BLAKE, PH. D. (*Berlin*),
Professor of Physics and Electrical Engineering.

LEWIS LINDSAY DYCHE, A. M., M. S. (*Kansas University*),
Professor of Zoology, Taxidermist, and Curator of Mammals and Birds.

FRANK WILSON BLACKMAR, PH. D. (*Johns Hopkins*),
Professor of History and Sociology.

CHARLES GRAHAM DUNLAP, A. B. (*Ohio Wesleyan*), LITT. D. (*Princeton*),
Professor of English Literature.

GEORGE BARLOW PENNY, B. S. (*Cornell*),
Dean of School of Fine Arts; and Professor of Harmony, Musical Composition,
and Organ.

SAMUEL WENDELL WILLISTON, A. M. (*Kansas Agricultural College*),
M. D., PH. D. (*Yale*),
Professor of Historical Geology, Vertebrate Anatomy, and Physiology.

CARL ADOLPH PREYER (*Vienna*),
Professor of Piano.

OLIN TEMPLIN, A. M., M. S. (*Kansas University*),
Professor of Philosophy.

FRANK HEYWOOD HODDER, PH. M. (*Michigan University*),
Professor of American History and Administration.

EDWIN MORTIMER HOPKINS, PH. D. (*Princeton*),
Professor of Rhetoric and English Language.

JOSEPH AUGUSTUS FARRELL (*Leipsic and Florence*),
Professor of Voice Culture, Singing, and Violin.

ALFRED HOUGHTON CLARK (*Boston Museum of Fine Arts*),
Professor of Drawing and Painting.

ERASMUS HAWORTH, M. S. (*Kansas University*), PH. D. (*Johns Hopkins*),
Professor of Physical Geology, Mineralogy and Petrography.

DAVID HULL HOLMES, PH. D. (*Johns Hopkins*),
Professor of Latin Language and Literature.

HENRY BYRON NEWSON, PH. D. (*Ohio Wesleyan*),
Associate Professor of Mathematics.

WILLIAM CHASE STEVENS, M. S. (*Kansas University*),
Associate Professor of Botany.

EPHRAIM DOUGLASS ADAMS, PH. D. (*Michigan University*),
Associate Professor of History and Sociology.

ARVIN SOLOMON OLIN, A. B. (*Ottawa*), A. M. (*Kansas University*),
Associate Professor of Pedagogy.

REV. HECTOR W. COWAN, A. M. (*Princeton*),
Associate Professor of Physical Training, and Chapel Director.

EDWARD CURTIS FRANKLIN,* M. S. (*Kansas University*), PH. D. (*Johns Hopkins*),
Associate Professor of Chemistry.

WILLIAM BALDWIN BROWNELL, A. B. (*Hamilton*), LL. B. (*Kansas University*),
Associate Professor of Criminal Law, Domestic Relations, Partnerships, Sales,
Agency, and Bailments.

MILES WILSON STERLING, A. M. (*Kansas University*),
Assistant Professor of Greek.

EDWARD CHARLES MURPHY, M. S., C. E. (*Cornell*),
Assistant Professor of Civil Engineering.

FRANK E. WARD,
Assistant Professor of Electrical Engineering Shops.

HANNAH OLIVER, A. M., (*Kansas University*),
Assistant Professor of Latin.

H. FOSTER JONES, A. B. (*Amherst*),
Assistant Professor of English.

ELMER FRANKLIN ENGEL, A. B. (*Kansas University*),
Assistant Professor of German, and Registrar.

EUGÉNIE GALLOO, B. L. (*Michigan University* and *University of France*),
A. M. (*Kansas University*),
Assistant Professor of French and Spanish.

ARTHUR ST. CHARLES DUNSTAN, C. E. (*Alabama Polytechnic Institute*),
Assistant Professor of Physics and Electrical Engineering.

MARTIN EVERETT RICE, M. S. (*Kansas University*),
Assistant Professor of Physics and Mathematics.

MARSHALL ALBERT BARBER, A. B. (*Kansas University*), A. M. (*Harvard*),
Assistant Professor of Botany.

MARY MARCHANT PIERCE-CLARK (*Hemenway Gymnasium, Harvard University*),
Assistant Professor of Elocution and Oratory, and Physical Training.

GEORGE WAGNER, PH. C. (*Michigan University*),
Assistant Professor of Pharmacy.

*Absent on leave. His position is temporarily filled by EDWARD BARTOW,
A. B. (*Williams*), PH. D. (*Göttingen*).

RALPH CURTIS GOWELL, A. B. (*Kansas University*),
Assistant Professor of Zoology.

RAPHAEL DORMAN O'LEARY, A. B. (*Kansas University and Harvard*),
Assistant Professor of English.

EFFIE JUNE SCOTT, A. B. (*Kansas University*),
Assistant Professor of French and German.

SAMUEL JOHN HUNTER, A. M. (*Kansas University*),
Assistant Professor of Entomology.

WALTER KEIFER PALMER, M. E. (*Ohio University*),
Assistant Professor of Graphics.

HUGO KAHL (*Upsala University*),
Systematic Entomologist, and Curator of Entomological Collections.

E. GENEVE LICHTENWALTER, Mus. B. (*Kansas University*),
Instructor in Piano.

WILLIAM MARION WHITTEN, B. S. (*Michigan University*),
Instructor in Chemistry.

ALFRED WASHBURN BENSON,
Lecturer on Pleading and Practice.

SAMUEL AGNEW RIGGS, A. M. (*Washington and Jefferson*),
Lecturer on Torts and Law of Railways.

D. M. VALENTINE, ex-Justice of the Supreme Court,
Lecturer on Wills and Successions, including Probate Practice.

C. L. DOBSON, Judge of the Circuit Court of Missouri,
Lecturer on Corporations.

DAVID MARTIN, ex-Chief Justice of Supreme Court of Kansas,
Lecturer on Evidence.

RALPH R. PRICE (*Kansas University*),
Student Instructor in European History.
(To begin September, 1897.)

CARRIE M. WATSON, A. B. (*Kansas University*),
Librarian.

Orations and Addresses.
1896.

BACCALAUREATE SERMON.

BISHOP JOHN H. VINCENT, D. D.

ALUMNI ORATION.

CHANDLER W. STEPHENSON, B. S.

COMMENCEMENT ADDRESS.

FRANK W. GUNSAULUS, D. D.

PHI BETA KAPPA ADDRESS.

FRANK H. HODDER, PH. M.

ANNUAL ADDRESS AT THE OPENING OF THE UNIVERSITY YEAR.

RICHARD CORDLEY, D. D.

The University.

The University of Kansas is as much an integral part of the public-school system of the state as is the high school or any of the grammar grades. The University is at the head of this system, and at this institution every attendant upon the lower grades is privileged some day to complete his education. Adhering strictly to the public-school-system idea, the courses of study of the majority of the high schools of the state are arranged in accordance with a plan of preparatory studies prescribed by the University. Students who complete this course of preparatory study are admitted to the University without examination. Men and women stand upon an equal footing, and students of either sex are admitted to all the privileges of the University without charge for tuition. The University now comprises the School of Arts, the School of Law, the School of Fine Arts, the School of Pharmacy, the School of Engineering, and the Graduate School.

Material Equipment of the University.

BUILDINGS.

North College.—This structure was the first building to be erected. It was completed in 1866, from which time until 1872 the entire work of the University was carried on within its walls. In 1872 the main building was completed, and North College was for a time closed. In 1890 it was again opened, and until the end of the school year, 1893-'94, was used by the School of Law. North College is 50 feet square, three stories high, and contains 18 rooms.

Main Building.—The main building was erected in 1872, to better accommodate the growing school and to relieve the crowded rooms of North College. It is 246 feet in extreme length, 98 feet wide in center, wings 62 feet each. There are 54 rooms in this building, of which one, the main audience room, is 94 feet long and 56 feet wide. This room has a seating capacity of 1,200. There are also in the main building 18 lecture rooms, each large enough to accommodate classes of 75 to 80 students. In this building are located the offices of the University, including the Chancellor's office, the office of the Secretary and Treasurer, and the office of the Registrar. The north half of the first floor is devoted to the use of the School of Law, including the law library. In the

basement laboratories have been fitted up to relieve the overcrowded condition of the chemistry building.

The Chemistry Building Is a structure in the form of a T, the main part extending east and west, being 80 by 35 feet, and the L north of this 40 feet square. The east wing of the main structure is occupied as a lecture room capable of seating 75 students. The School of Pharmacy occupies the lower half of the building.

Snow Hall of Natural History.—Snow Hall is 110 feet in length by 100 feet wide, is provided with ample basement almost entirely above ground, two stories, each 16 feet in the clear, and an attic of 12 feet. The west half of the building is occupied by the museums of the geological and zoological departments. On the first floor of the east half is the lecture room, extending through the basement and first story, and arranged in amphitheater style. This room has accommodations for 200 students. On the second floor are the laboratories and collections of the departments of entomology and botany. The third floor is occupied by the department of zoölogy, and here also are the workrooms of the taxidermist. The first floor is given up to the department of geology and vertebrate anatomy. This building is furnished throughout with the best appliances for investigation and instruction in all branches of natural history, including 50 compound microscopes of the best manufacture.

Electrical-Engineering Shops and Engine House.—This building, 86x48 feet, contains a battery of six boilers, for steam heating and power, and also on the first floor two steam-engines, of 150 and 35 horse-power, respectively, for the machine shop, and several dynamo plants, used for instruction in electrical engineering. The second and third stories contain the machine shop for the students of the electrical-engineering course. The building has testing and power wires running to the physical laboratory, where the more delicate instruments are in use. The dynamo plants have capacity for lighting all the University buildings as well as the grounds.

Spooner Library.—This building was erected in 1894. It was built by means of the bequest of Wm. B. Spooner, of Boston. Its total cost was \$75,000. Its length is 112 feet and extreme width 50 feet. The building consists of two stories and a basement, the greater part of which is above ground. On the first or main floor are located the general reading room, a newspaper room, and the librarian's and cataloguer's offices. The reading room is admirably arranged and lighted. In the newspaper room are kept the county and city weeklies and dailies published within the state. In addition, dailies published in all the larger cities of the United States are kept on file. The second floor of the building contains a hall suitable for smaller audiences than are accommodated in

University Hall. In the basement are seminary rooms used for private study of students in the various departments. The fire-proof book stack, with a capacity of 100,000 volumes, is an integral part of the building, and yet it is so cut off as to render its contents absolutely secure. The book stack consists of five stories, each eight feet high. The entire inside work, including floors, supports, and shelves, is of iron. The entire building is lighted throughout by electricity. Its every appointment is modern and its facilities and usefulness unexcelled.

Physics and Electrical-Engineering Building.—This is of Chateau Renaissance style, three stories high, of Cleveland, Ohio, sandstone, and was completed September, 1895, at a cost of \$58,000. Besides a general lecture room seating 100 and two class rooms seating 30 each, and a departmental reading room and library, there are two general laboratory rooms covering 3,200 square feet. Accessible to these, are supply, battery, workshop, balance and chemical rooms. There are also eight smaller rooms specially adapted for advanced physical research, each provided with water, gas, and electricity, and each basement laboratory room has a stone pier to bed rock making it free from vibrations of the building. Heavy electrical currents are so numerous and so planned that, to almost any laboratory room, all electrical currents from the dynamo station may be delivered. A 60-cell storage battery is continually charged for laboratory work. The building is constructed without iron below the third story to avoid magnetic disturbances. The general apparatus room contains now about \$23,000 worth of demonstration and laboratory instruments. The building is heated by the Sturtevant forced-draft system, regulated by electric thermostats in each room. The air is changed automatically every 15 minutes and in the lecture room every 10 minutes. The total amount of floor space for research purposes is 5,690 square feet.

Music Hall.—A large rented building, conveniently located on Massachusetts street, is at present occupied by the School of Fine Arts. It contains a large concert room and a number of smaller rooms used as lecture and practice rooms and studios.

APPARATUS OF INSTRUCTION.

The students in civil engineering are well provided with instruments for engineering operations in the field and the draughting room. This equipment consists of chains, tapes, compasses, engineers' transits of different forms, engineers' levels and leveling rod; aneroids; a transit, level of precision, and plane table, for geodetic surveying; rods, floats, and current meter, for measurement of the flow of streams; machine for testing the strength of cements; a 100,000-pound Olsen testing machine; models illustrative of problems in descriptive geometry; blue-printing apparatus; blue prints of bridge-

details and standard railway plans; photographs of bridges and pumping machinery.

In physics and electrical engineering, the equipment is added to by annual appropriations. About \$23,000 has been thus far expended. Recently large additions for original and precise experimentation have been imported, and it is believed a strong undergraduate course in laboratory work can now be carried out and much advanced research presented. The most accurate instruments of well known best makers, both of this country and abroad, are provided, and the facilities of the engineering shops have allowed much new and original apparatus to be designed and constructed. It is the aim to keep the demonstration and laboratory apparatus to the standard of the newest and best makes and to the needs of modern laboratory methods.

The department of chemistry is well supplied with apparatus and material for carrying on university instruction. Laboratories are equipped in the chemistry building for work in general chemistry and qualitative analysis, quantitative analysis, and assaying, while in the basement of the main building temporary accommodations have been supplied for classes in organic chemistry, quantitative analysis, and gas analysis.

In astronomy, the apparatus is not extensive, but in lieu of an observatory it answers its purpose. There belong to this department, (1) a telescope with an object glass of six inches, manufactured by A. Clark & Sons, and costing \$1,000; (2) a good sextant; (3) a new celestial globe of 20 inches diameter; (4) a large number of astronomical slides, representing the sun and sun spots, the moon, the planets, comets, nebula, the constellations, variable and multiple stars, etc.

A good collection of plaster casts, models, photographs, plates, etc., has been made, as an aid to the study of the ancient and modern languages. Among these are plaster casts of many of the masterpieces of Greek sculpture. A model of the Acropolis, a reduced model of the east pediment of the Zeus temple at Olympia, casts of the Theseus of the Parthenon, Venus of Melos, and the Augustus in military dress, may be specifically named.

In addition, this work and that in history, politics, sociology and pedagogy are furnished with maps, charts, illustrative apparatus, photographs, etc., very helpful to the student. To this apparatus of instruction additions are being constantly made.

Museums of Natural History.

F. H. SNOW, Director.

L. L. DYCHE, Curator of the Zoological Collections.

S. W. WILLISTON, Curator of the Paleontological Collections.

E. HAWORTH, Curator of the Mineralogical Collections.

W. C. STEVENS, Curator of the Herbarium.

S. J. HUNTER, Assistant in Entomology.

M. A. BARBER, Assistant in Cryptogamic Botany.

HUGO KAHL, Curator of the Entomological Collections.

E. S. RIGGS, Assistant in Paleontology.

The work in botany, entomology, zoölogy and geology is greatly aided by the illustrative opportunities afforded by the cabinet collections, which contain upwards of 200,000 specimens. These collections have been chiefly obtained during the past 20 years by University exploring parties in western Kansas, Colorado, New Mexico, British America, Alaska, and Greenland. By means of the material thus accumulated a system of exchange has been established with leading institutions and naturalists in all parts of the United States, so that the cabinets contain a very satisfactory representation of the plants, insects, mammals, birds, minerals, and fossils, not only of the state of Kansas, but also the whole of North America.

The herbarium includes upwards of 5,000 species of plants, permanently protected from destruction by vermin, and systematically arranged for convenient examination by students and visitors. The method of arrangement is substantially the same as that adopted at Harvard University.

The entomological collection contains more than 15,000 species and 100,000 specimens, representing all the different orders of insects. The instruction in this department has special reference to the discrimination of the beneficial from the injurious species, and the extensive collections are of practical value to the agricultural and horticultural interests of the state as well as to the students of the University in the determination of the names and habits of our insect friends and foes.

The collection of large mammals indigenous to the North American continent is one of the most complete in the world. The specimens have been collected from various parts of the continent, including a good series from Greenland, and the Atlantic coast as far north as Cape Sabine, and another series from the Pacific coast as far north as the Aleutian islands. Many of the large animals have been mounted and placed on exhibition in the public museums.

There are thousands of specimens in the shape of skins, skeletons and skulls which are packed away in drawers and cases from the want of space for proper exhibition. Most of these are available for students studying zoölogy and comparative anatomy, and are used by the professors to illustrate their various lectures.

The ornithological cabinets comprise upwards of 2,500 specimens of birds, belonging to 500 different species. These specimens are carefully protected in moth-proof cases. A portion of them are unmounted skins, furnishing ample material for laboratory study when fresh specimens cannot be readily obtained.

A series of skeletons affords representative types for the study of osteology.

An alcoholic collection of marine radiates, mollusks and articulates from the Atlantic and Pacific coasts affords to the zoölogical student the means of investigating the anatomical structure of the leading forms in all the great "types" of the animal kingdom.

In the conchological cabinet are included nearly 1,000 species of shells from all parts of the world.

The mineralogical and geological cabinets contain upwards of 100,000 specimens, chiefly from Kansas and the Rocky mountains.

The geological collection comprises an excellent series of typical paleozoic invertebrate fossils, especially those of the carboniferous of Kansas. The collection of mesozoic vertebrates is one of the most noteworthy in the world. Recent valuable additions have been made to the collection of vertebrates from the miocene and pliocene tertiary, and extensive additions are constantly been made.

The collection of cretaceous plants, obtained chiefly by the personal labor of the late Mr. E. P. West, is conceded to be the largest in the world.

The Library.

CARRIE M. WATSON, Librarian.

HELEN BINNINGER SUTLIFF, Assistant.

MABEL CLARE ROGERS, Assistant.

CLARA SCIOTO GILLHAM, Assistant.

EDITH M. CLARKE, Assistant.

GOMER THOMAS, Student Assistant.

JOHN EDWARD MCPHERSON, Student Assistant.

WILFRED WITHINGTON, Student Assistant.

JOHN M. CLOYES, Student Assistant.

CARY L. BURDICK, Attendant in Law Library.

LEWIS G. FERREL, Attendant in Law Library.

The University library, with the exception of the law library, is in the Spooner library building, used solely for library purposes. The law library is in the main building, adjoining the lecture rooms used by the law department. The University library is open every day of the year, excepting Sundays and legal holidays. Library hours are 8 A. M. to 6 P. M., Saturdays 8 A. M. to 3 P. M.

The most liberal facilities for using the library are offered to all members of the University. All books, except reference books and books too rare to be easily replaced, may be taken from the library by the student for three weeks.

The library is supplied with a card catalogue, which greatly facil-

itates the use of the books. The general reading room is a large, cheerful, comfortable and well-equipped room, lighted by 200 electric lamps, so that there is a perfect, evenly diffused light. Here may be found the general reference books, cyclopedias, dictionaries, card catalogue, and the more important journals and periodicals.

The library at present numbers 26,823 volumes, which are kept in the fire-proof stack room.

Several departments have seminary rooms in this building. Books upon the subjects under discussion in the class rooms are placed in these seminary rooms, where it is convenient for the students to use them.

An annual appropriation of \$5,000 is devoted to the purchase of books. The books are selected with the greatest care, and the endeavor is made to furnish the students with the latest and best authorities in the various departments. While the library is not large, it is at all events sufficiently full to enable the student to prosecute research, and to furnish him substantial aid in his investigation.

The School of Arts.

Faculty.

F. H. SNOW, *President*,
Botany and Entomology.

E. MILLER, *Dean*,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

F. O. MARVIN.
Civil Engineering.

E. H. S. BAILEY,
Chemistry and Metallurgy.

A. M. WILCOX,
Greek.

L. E. SAYRE,
Pharmacy.

A. G. CANFIELD, *Secretary*,
French.

L. I. BLAKE,
Physics.

L. L. DYCHE,
Zoology.

F. W. BLACKMAR,
History and Sociology.

C. G. DUNLAP,
English Literature.

G. B. PENNY,

Voice Training, Contrapuntal Harmony, Musical Composition, and
History of the Fine Arts.

S. W. WILLISTON,

Historical Geology and Paleontology.

OLIN TEMPLIN,

Philosophy.

F. H. HODDER,

American History and Administration.

E. M. HOPKINS,

English Language.

A. H. CLARK,

Drawing.

E. HAWORTH,

Physical Geology and Mineralogy.

D. H. HOLMES,

Latin.

H. B. NEWSON,

Mathematics.

W. C. STEVENS,

Botany.

E. D. ADAMS,

History and Sociology.

A. S. OLIN,

Pedagogy.

Rev. H. W. COWAN,

Physical Training.

E. C. FRANKLIN,

Chemistry.

M. W. STERLING,

Assistant in Greek.

E. C. MURPHY,
Assistant in Civil Engineering.

HANNAH OLIVER,
Assistant in Latin.

H. FOSTER JONES,
Assistant in English.

E. F. ENGEL,
Assistant in German.

EUGÉNIE GALLOO,
Assistant in French and Spanish.

A. ST. C. DUNSTAN,
Assistant in Physics.

M. E. RICE,
Assistant in Physics and Mathematics.

M. A. BARBER,
Assistant in Botany.

MARY M. PIERCE-CLARK,
Assistant in Elocution and Physical Training.

GEORGE WAGNER,
Assistant in Pharmacy.

W. M. WHITTEN,
Instructor in Chemistry.

R. C. GOWELL,
Assistant in Zoology.

R. D. O'LEARY,
Assistant in English.

EFFIE J. SCOTT,
Assistant in French and German.

S. J. HUNTER,
Assistant in Entomology.

Courses of Instruction.

Admission.

Every person who applies for admission to the Freshman class in the School of Arts is required to be examined in the various subjects mentioned below, or to present a certificate from high school, academy, or college, as explained under "Admission by Certificate." An applicant may be admitted, although deficient in some of these requirements, provided such deficiency does not exceed three * terms' work, but all deficiencies must be made good within a period determined upon at the time of admission.

Requirements for Admission.

1. *Physical Geography.*
2. *General History.* Myers, Sheldon, Barnes, or Fisher.
3. *Civil Government.* Thorpe and Hodder's Civil Government of the United States and of Kansas.
4. *Algebra*, through quadratic equations, radicals, and theory of exponents.
5. *Geometry.* Plane and solid.
6. *Physics.* Appleton's School Physics; Gage's Elements of Physics, Carhart and Chute's Elements of Physics, or equivalent.
7. *Language.* In language, the candidate may offer any one of the following groups.

- | | |
|-----|--|
| I. | { English, three years. |
| | { Latin, three years. |
| II. | { English, one year. |
| | { Latin, three years, |
| | { and of either French, German, or Greek, two years. |

The "years" above referred to are explained below in detail:

ENGLISH.

One Year. The applicant must have devoted the equivalent of two periods or recitations weekly to the study of classics, and three periods weekly to the study of English composition, and have a satisfactory knowledge of descriptive grammar and of grammatical analysis. He will be required to submit a list of the classics read in preparation for entrance, specifying which were read in class and which as collateral reading, and to write an

*A "term's work" signifies one study pursued daily for a period of half a year. After 1897-'98 applicants for admission to the Freshman class who have more than two terms' deficiency will not be allowed to enter.

essay of not less than 200 words upon a subject designated by the examiner and connected with some book on the list submitted. This essay will constitute the final test as to his work in composition. In literature, the essay will be supplemented by questions as to the subject-matter of the works he has critically studied in class, and their relation to the author and his time. In grammar, a knowledge of the leading facts will be required, and the applicant will be required to analyze sentences not presenting idiomatic difficulties, and to criticize ordinary examples of ungrammatical expression.

Full explanations of the nature of the work required in English and suggested courses of study in literature will be found in the "Circular touching the Requirements in English" published by the University.

For the examination in 1897 the course recommended is as follows: For class study: Shakspeare, Merchant of Venice; Burke, Speech on Conciliation with America; Scott, Marmion; Macaulay, Life of Samuel Johnson. For collateral home reading: Shakspeare, As You Like It; Defoe, History of the Plague in London; Irving, Tales of a Traveler; Hawthorne, Twice-Told Tales; Longfellow, Evangeline; George Eliot, Silas Marner. For this list may be substituted the following, with an equal amount of collateral reading: Shakspeare, Twelfth Night; Longfellow, Courtship of Miles Standish; Irving, Sketch Book; Scott, Ivanhoe; Dickens, David Copperfield.

The course recommended for 1898 is as follows: For class study: Shakspeare, Macbeth; Burke, Speech on Conciliation with America; De Quincey, Flight of a Tartar Tribe; Tennyson, The Princess. For collateral home reading: Milton, Paradise Lost, books I and II; Pope's Iliad, books I and XXII; Addison, Sir Roger de Coverley Papers; Goldsmith, Vicar of Wakefield; Coleridge, Ancient Mariner; Southey, Life of Nelson; Carlyle, Essay on Burns; Lowell, Vision of Sir Launfal; Hawthorne, House of the Seven Gables.

Certificates from accredited high schools, in order to be accepted for one year of English, must show that, in literature, the applicant has read the works specified in some one of the recommended courses or their equivalent, and that he has devoted to the work the required amount of time in class and at home. In composition and grammar, the certificate must show that the applicant has devoted the required time to the subject; that the time has been spent largely in actual writing and rewriting after criticism, and that he has mastered the leading facts of grammar, and can write with grammatical correctness.

Three Years. In addition to the preceding requirements for one year, the applicant must have devoted the equivalent of four periods or recitations weekly for one year to the study of literature, chiefly classics: three periods weekly for one year to composition: one period weekly for one year to rhetoric: one period weekly

for one year to English language history and related subjects; and one period weekly for one year to the historical and scientific review of grammar. The applicant will be examined in the elements of rhetorical theory, particularly those relating to the choice and use of words and the structure of the sentence, and in the general principles of the paragraph and the whole composition, including the making of a plan. He will be required to write a short essay upon a literary topic, and another, narrative or descriptive, upon some subject based upon his own experience.

In literature, the candidate will be required to submit a list of 20 classics read in preparation for entrance, and his literary topic will be designated by the examiner from some one of these. The examination in literature will relate to details of style, subject-matter, purpose and historical relations of some of the classics read, and to the general outline of English literary history to the eighteenth century.

In language, the examination will include the history of the English language, and in connection with it the important facts of grammatical history, especially such as have to do with the decay of inflections, with idioms, and with etymology.

The following text-books, or their equivalent, may be used as a basis for preparatory work: In rhetoric, Genung's *Outlines of Rhetoric*; in literature, 20 classics and the first 218 pages of Pancoast's *Introduction to English Literature*; in language history, Lounsbury's *History of the English language*, part I; and in grammatical review and grammatical history, West's *English Grammar*, and Lounsbury's *History of the English Language*, part II.

For a full list of teachers' helps, and information as to their nature and use, see the "Circular touching the Requirements in English," already mentioned.

Certificates from accredited high schools, if accepted for three years of English, must show that the required amount of time has been devoted to these subjects by the applicant, and that he has completed with satisfactory standing the work as outlined. In all cases of doubt, the right to examine is reserved.

FRENCH.

First Year. The translation at sight of easy French prose, and the writing of simple French sentences; a thorough knowledge of the conjugation of verbs, regular and irregular; and familiarity with the elementary principles of syntax (as much as is contained, for example, in the first part of Whitney's or Otto's *Grammar*).

Second Year. Thorough acquaintance with French grammar—ability to read readily at sight; knowledge of some period of French literature, based upon the reading of its representative works.

GERMAN.

First Year. Grammar (Otis). Thorough drill in the declension of nouns and adjectives, and in the conjugation of verbs, both regular and irregular; translation of simple English sentences into German. Reader (Brandt), 100 pages, with careful attention to points of grammar and syntax. Dictation of simple German prose.

Second Year. Reader (Brandt completed), Wilhelm Tell (Deering's text). Sight-reading (*Der Zerbrochene Krug*). Exercises in composition and dictation.

GREEK.

First Year. White's Beginners' Greek Book, or Frost's Greek Primer, or an equivalent.

Second Year. Xenophon's Anabasis, two books, or their equivalent. In place of the above two years' work, the candidate may offer: The translation at sight of simple Attic prose, with questions on the usual forms and ordinary construction.

LATIN.

First Year. Grammar and reader.

Second Year. Cæsar's Gallic War, four full books, or an acceptable equivalent, and two of Cicero's Orations.

Third Year. Four of Cicero's Orations, Vergil's Æneid, five books, with questions on the subject-matter, grammar, and prosody, and the translation into Latin of simple sentences founded upon Cæsar and Cicero.

Admission by Certificate.

I. Students will be admitted into the Freshman class upon the certificate of the president, superintendent or principal of any college, academy, or other incorporated institution of learning, or of any public high school of the state, showing that such students have completed all the preparatory prescribed studies as laid down in the University catalogue.

II. Students who present certificates in accordance with the above regulations, showing that they have completed all the required preparatory studies except three terms' work,* will be admitted with conditions, without examination. All entrance deficiencies must be made good within one year from the time of admission.

Candidates for admission who do not present certificates in accordance with the above regulations will be received into the University only on examination.

* Two terms after 1897-'98.

STATE HIGH SCHOOLS.

I. Names of high schools reporting courses which fully prepare for the Freshman class, School of Arts, are as follows :

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Abilene.....	J. H. Niesley.....	W. H. Wagner.
Alton, Ill.....	R. A. Haight.....	G. E. Wilkerson, M. S.
Asherville.....	.....	S. F. Tucker.
Argentine.....	.....	C. R. Sortor.
Arkansas City.....	T. W. Conway.....	R. H. Ewing.
Atchison.....	J. H. Glotfelter.....	C. A. Shively.
Atchison county, Effingham..	.....	J. W. Wilson, A. B.
Augusta.....	W. J. Speer, B. S.....	W. J. Speer, B. S.
Beloit.....	G. M. Culver.....	Harold Barnes, A. B.
Blue Rapids.....	G. B. Buikstra, A. B.....	G. B. Buikstra, A. B.
Burlingame.....	.....	C. S. Fowler.
Carbondale.....	J. T. Albin, A. M.....	J. T. Albin, A. M.
Cawker City.....	L. J. Hall.....	L. J. Hall.
Centralia.....	Geo. C. Baker.....	Geo. C. Baker.
Chanute.....	H. C. Ford.....	Lottie Liggett.
Chetopa.....	A. J. Lovett, A. M.....	A. J. Lovett, A. M.
Clay Centre.....	B. F. Merten, A. B.....	Wm. S. Heusner, A. B.
Coffeyville.....	E. S. Jones, B. S.....	S. A. Harbourt.
Council Grove.....	B. F. Nihart, A. M.....	M. F. Amrine.
Cottonwood Falls.....	.....	W. C. Austin.
Dickinson county, Chapman,	.....	S. M. Cook.
Dodge City.....	Warren Baker.....	H. A. Cord.
Downs.....	W. B. Flanders.....	Katherine Chapin.
Emporia.....	L. A. Lowther, A. M.....	James D. Barnett, A.M.
Fort Scott.....	D. M. Bowman.....	W. C. Lansdon.
Frankfort.....	.....	T. P. Bogar.
Fredonia.....	J. R. Campbell.....	F. N. Howell.
Galena.....	T. B. Mosher.....	Mrs. Ella F. Myers.
Garden City.....	Chas. E. Johnson, A. B....	Chas. E. Johnson, A. B.
Garnett.....	Frank McClellan.....	I. Stimmel.
Girard.....	John W. Weltner.....	John W. Weltner.
Great Bend.....	Ed. T. Barber.....	Alice Reynolds.
Gypsum City.....	.....	S. M. Simmons.
Halstead.....	H. O. Kruse, A. B.....	F. E. Genet.
Harper.....	Theo. Fulton.....	Theo. Fulton.
Hartford.....	R. T. Madden, A. B.....	R. T. Madden, A. B.
Hays City.....	Oscar A. Kropf, B. A.....	Oscar A. Kropf, B. A.
Herington.....	W. W. Ramey.....	Clara Williams.
Hiawatha.....	E. O. Leatherwood.....	T. B. Freas, A. B.
Hill City.....	John S. Dawson.....	John S. Dawson.
Holton.....	Erwin E. Heath, A. B.....	E. J. Benton.
Horton.....	J. E. Dyche, A. B.....	H. Fiegenbaum, A. B.
Humboldt.....	W. C. Brookins.....	Ulrick Jarrett.
Hutchinson.....	Geo. W. Winans.....	Mrs. E. H. Richardson.
Independence.....	S. M. Nees, B. S.....	S. A. M. Young, A. B.
Iola.....	W. S. Picken.....	Clifford Mitchell.
Junction City.....	G. W. Kendrick.....	G. L. Town.
Kansas City.....	L. L. L. Hanks, Ph. D.....	Geo. E. Rose.
Kansas City, Mo.....	J. M. Greenwood, A. M....	Jno. T. Buchanan.
Kingman.....	Chas. A. Murphy, B. S.....	J. F. Kaho, A. B.
Labette county, Altamont.....	.....	T. B. Hanna.
La Cygne.....	.....	W. A. Stacey.
Lawrence.....	Frank P. Smith, A. M.....	Frank H. Olney, A. B.

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Leavenworth.....	M. E. Dolphin.....	W. A. Evans.
Lyndon.....	L. A. Parke.....	L. A. Parke.
Lyons.....	F. C. Jacoby.....	Mary Schmalzreid.
Marion.....	B. D. Van Ostrand, B. S....	J. M. Winslow.
Marysville.....	C. C. Starr, Ph. B., B. S....	N. T. Adams, A. B.
McPherson.....	H. Winsor.....	Laura Humphrey.
Minneapolis.....	E. P. McMahon.....	Geo. W. Smith, B. S.
Moran.....	E. W. Myler.	
Neodesha.....	G. W. Smith.....	Irving Hill.
Newton.....	J. W. Cooper.....	D. R. Krehbiel, A. B.
Norton.....	H. M. Culter.....	Clara B. Morgan, A. B.
Oklahoma City, Oklahoma..	Jno. A. McClain.....	M. J. Patterson.
Olathe.....	S. W. McGarrah, A. M.....	H. P. Butcher, A. B.
Osborne.....	H. C. Riggs.	
Oskaloosa.....	D. L. Stanley.	
Oswego.....	Chas. H. Williams.....	Cora B. Hazlett.
Ottawa.....	W. M. Sinclair.....	W. H. Olin.
Paola.....	E. A. Farrington, A. B.....	F. W. Allin, B. S.
Parsons.....	S. D. Frazier.....	Roxie E. Clark.
Peabody.....	A. H. Bushey.....	Louise A. Doerle.
Phillipsburg.....	Treadwell C. Coffman.....	Treadwell C. Coffman.
Pittsburg.....	S. W. Black.....	H. H. Ewing, B. S.
Pleasanton.....	W. N. Logan, A. M.....	W. N. Logan, A. M.
Pratt.....	Grant Van Hoose.....	M. N. Hittle.
Quenemo.....	C. A. Deardorff.....	C. A. Deardorff.
Sabetha.....	Isaac B. Morgan.....	Isaac B. Morgan.
Salina.....	A. Ludlum.....	Mary Ludlum.
Sedan.....	D. A. Iliff.....	D. A. Iliff.
Sedgwick.....		E. L. Hillis.
Seneca.....	J. G. Schofield.....	P. L. Burlingame.
Solomon.....	L. H. Wishard.....	Carrie Matson.
St. Mary's.....		A. L. Bell.
Topeka.....	W. M. Davidson.....	John L. Williams.
Troy.....	U. S. C. Busch.....	U. S. C. Busch.
Valley Falls.....	J. M. Nation.....	H. E. Dornblaser, A. M.
Washington.....	H. W. Charles.....	E. L. Enochs.
Wathena.....		G. W. Kinkead.
Wellington.....	H. F. M. Bear, A. B.....	Thos. W. Butcher, A. B.
Wichita.....	Frank R. Dyer, A. M.....	Frank R. Dyer, A. M.
Winfield.....		J. W. Spindler.

Total in list I, 93.

ACADEMIES.

<i>Name of academy.</i>	<i>Location.</i>	<i>Principal.</i>
Arkansas City Academy.....	Arkansas City.....	L. E. Eddy, M. S.
Friends' Academy.....	Washington.....	May Pemberton, Ph. B., B. L.
Hiawatha Academy.....	Hiawatha.....	L. E. Tupper.
Lewis Academy.....	Wichita.....	J. M. Naylor, A. M., Ph. D.
Southern Kansas Academy...	Eureka.....	T. H. Rhodes, A. B.
Wentworth Military Academy,	Lexington, Mo.....	Sanford Sellers, M. A.

Academies in list I, 6.

II. Names of high schools reporting courses which fall short of preparing for the Freshman class, School of Arts, by not more than the amount of three terms' work, are as follows:

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Alma	H. W. Jones, B. S.	H. W. Jones, B. S.
Belleville.....	C. C. Canfield	J. Z. Gilbert.
Burlington	L. D. Ellis, B. A.	L. D. Ellis, B. A.
Burrton.....	H. C. Campbell.....	H. C. Campbell.
Caldwell.....	I. E. Swain.....	Carrie Perry.
Cherry Vale	H. S. Myers	O. M. Frazier.
Clyde	S. V. Mallory, B. S.	Bertha Calvin.
Colby.....	.....	Walter G. Riste.
Columbus.....	E. L. Enloe	O. C. Ecke.
Concordia.....	A. B. Carney.....	Ida R. Wilcox.
Delphos.....	Theo. H. Scheffer, A. B.	Theo. H. Scheffer, A. B.
Ellsworth	W. W. Harvey.....	Mary S. Taylor.
Enterprise.....	H. M. Ambrose, A. M.	H. M. Ambrose, A. M.
Eureka	G. A. Bower.....	Jessie Brookover.
Franklin	J. C. Kenwell.....	J. C. Kenwell.
Herington.....	W. W. Ramey.	.....
Hill City .....	.....	J. L. Dawson.
Howard.....	John Schurr, A. M., M. D. .	John Schurr, A. M., M. D.
Kiowa.....	J. C. Kenwell.	.....
La Crosse.....	.....	W. F. Clark.
Lakin.....	.....	E. W. Kelley.
Lincoln.....	W. L. Helton, M. S.	W. L. Helton, M. S.
Mankato	C. C. Towner.	.....
Mound Valley.....	.....	S. L. Fogleman.
Osawatomie.....	R. S. Russ.....	Sadie Mann.
Smith Centre.....	.....	J. N. Mosher.
Sterling	W. J. Hull.....	W. C. McCroskey, A. B.
Wamego.....	E. L. Cowdrick, B. D.	Ada Pixley, B. S.
Waverly .....	.....	C. W. Thompson.
White Cloud .....	.....	W. H. Greider.
		Total in list II, 20.

ACADEMIES.

<i>Name of academy.</i>	<i>Location.</i>	<i>Principal.</i>
Hesper Academy.....	Hesper.....	H. H. Townsend, B. S.
Tonganoxie Friends' Academy,	Tonganoxie	Irving King, A. B.
Haviland Academy	Haviland.	J. E. McMeen.
		Academies in list II, 3.

Special Students.

Persons of mature years (at least 21 years of age) and character, who desire for reasons satisfactory to the Chancellor or Faculty to pursue some special line of study, without becoming candidates for a degree, are allowed to enter as special students. Such students must file with the Registrar of the University, prior to entering classes, a statement of the work which they desire to pursue, and a written statement from the instructors under whom work is to be carried that the student is prepared to undertake the work specified. With the advice and consent of the Faculty, special students may carry other studies than that in which they are specializing, provided

such studies are closely connected with their special work and necessary to it.

Special students are subject to the same regulations as regular students with regard to the quality of work performed, and attendance at recitations and examinations, but not as to the number of studies to be pursued. The Faculty may at any time deprive any special student of his privileges if it appears that he is abusing or neglecting them.

Registration.

All candidates for admission to the Freshman class having high-school certificates, and all students of the University intending to pursue their studies in the ensuing year, must present themselves for registration at the University on Wednesday and Thursday, September 8 and 9, 1897. Registration at a later date will be permitted only on the presentation of a satisfactory reason for the delay.

Times and Places of Examination.

Candidates for the Freshman class not presenting the required certificates will be examined at the University, Lawrence, either on Thursday and Friday, June 10 and 11, 1897, or on Wednesday and Thursday, September 8 and 9, 1897. Candidates will be examined at other times only on giving to the Registrar a satisfactory reason for nonattendance at the appointed examinations. The following is the schedule of examinations in June and in September:

THURSDAY, JUNE 10, OR WEDNESDAY, SEPTEMBER 8.

- 9-10. English.
- 10-11. Algebra.
- 11-12. French.
- 12-1. Physical Geography.
- 2-3. German.
- 3-4. Civil Government.

FRIDAY, JUNE 11, OR THURSDAY, SEPTEMBER 9.

- 9-10. Geometry.
- 10-11. Latin.
- 11-12. Outlines of History.
- 2-3. Greek.
- 3-4. Physics.

Candidates for admission may divide the examination between two years, or between June and September of the same year, under the following conditions: The applicant may present himself at the preliminary for examination in any or all of the prescribed subjects, and if he is successful in five or more subjects, he need not be again examined in them.

Admission to Advanced Standing.

I. *By Examination.* A candidate may be admitted to the Sophomore, Junior, or Senior class, if he appear on examination to be prepared in the following studies: (1) In the studies required for admission in the Freshman class. (2) In all prescribed studies already pursued by each class for which he offers himself; and in as many optional studies as he would have pursued if he had entered at the beginning of the course.

II. *Without Complete Examination.* Graduates or students from the higher classes of other colleges may be admitted to advanced standing upon the presentation of a certificate stating in detail the work done, under such conditions as the Faculty may determine to be just in each case, upon consideration of the applicant's previous course of study, and of the evidence he presents of his proficiency in that course. For information on this subject, application should be made to the Registrar of the University.

Undergraduates from other colleges must present certificates of honorable dismissal, or other satisfactory evidence of good character.

It is required of all candidates for the first degree that the last year be spent in residence at the University.

Course of Study Leading to the Degree of Bachelor of Arts.

The following is an outline of the studies prescribed for the degree of bachelor of arts. These studies are described more in detail in the account of courses offered by the several departments. The Roman numerals below correspond to the numerals used in the detailed account of courses.

Freshman Year.

(Each academic year is divided into two terms.)

FIRST TERM.

Mathematics (Algebra) I, at 8, 9, or 10.

English (*B*) I, at 8 or 11.

Hygiene, 20 lectures, at 4.

Physical Training, three days a week, at 3.

Elocution or Voice Training.

One of the following :

French I, III, German III, Greek III, V, Latin I, III, at 9.

French I, V, German I, V, Greek I, Latin I, III, at 11.

SECOND TERM.

English (*A*) I, at 8 or 10.

Mathematics (Trigonometry) II (**a*), at 8, 9, or 10.

Chemistry I (**b*), at 8 or 10.

Elocution or Voice Training.

Physical Training, three days a week, at 3.

One of the following :

French II, IV, German IV, Greek IV, VI, Latin II, IV, at 9.

French II, VI, German II, VI, Greek II, Latin II, IV, at 11.

Throughout his entire Freshman year, the student is required to carry at least one foreign language. He may take any language for which he is prepared, and may begin French, German,† or Greek. See list of courses in the languages.

Freshmen offering three years of English do not take the English of the Freshman year, but must take, in place of the English of the first term, Sophomore history or a second foreign language, and, in place of the English of the second term, botany

**a*) means first half of term ; *b*) means second half of term.

† Students who have not completed the full three years of Latin for entrance will not be admitted to the class in beginning German.

or zoölogy, or a second foreign language, subject to the regulation regarding choice of courses from the two groups of the Sophomore year.

Sophomore Year.

FIRST TERM.

Group A :

French I, III, German III, Greek III, V, Latin, I, III, at 9.

French I, V, German I, V, Greek I, Latin, I, III, at 11.

Group B :

Mathematics III, at 8.

English History, at 10.

Chemistry II, at 1 to 3.

Botany III, at 10 to 12.

SECOND TERM.

Group A :

English (*A*) II, French II, IV, German IV, Greek IV, VI, Latin, II, IV, at 9.

English (*A*) II, French II, VI, German II, VI, Greek II, Latin II, IV, at 11.

Group B :

Mathematics IV, at 8.

Logic and Psychology, at 10.

Surveying, at 10.

Zoölogy, at 1 to 3.

Botany I, at 10 to 12.

In the Sophomore year, all the language courses constitute what is known as "Group A"; all other courses are included in "Group B."

The work of the Sophomore year shall consist of six themes, physical culture three days a week, and six full terms' work. The six full terms' work shall be chosen from groups A and B, not more than four terms' work from either group.

At the end of the Sophomore year, the student must have done some work in the school, in at least two languages other than English.

Students in botany and zoölogy are required to take drawing one hour a week for one full term.

Junior and Senior Years.

Each Junior and Senior is required to write two forensics, or equivalent theses, each term, in addition to which he must pursue in each term three full studies, or their equivalent, chosen by himself from the list of optional studies, in accordance with the following regulations:

In his Junior and Senior years the student shall be free in his choice of optional studies, but may not take more than four terms'

work in one department or under one instructor. The following are the departments in which optional studies are offered :

1. Botany and Entomology.
2. Zoölogy and Anatomy.
3. Historical Geology and Physiology.
4. Physical Geology, Mineralogy, and Petrography.
5. Chemistry.
6. Civil Engineering.
7. Physics.
8. Mathematics and Astronomy.
9. Philosophy.
10. Sociology and Political Economy.
11. European History.
12. American History and Administration.
13. Greek.
14. Latin.
15. German.
16. French.
17. English.
18. Pharmacy.
19. Pedagogy.
20. Music.
21. Spanish.
22. Organic Evolution.

List of Courses.

NOTE.—(*a*) means that the study occupies the first half term, (*b*) the last half term. Unless otherwise stated, all courses are open to Juniors and Seniors.

1.—Botany and Entomology.

I. Elementary Structural Botany.—Laboratory work 10 hours per week and lectures. Field exercises. 2d term. Every day, 10 to 12. *Freshman and Sophomore alternative.* Professor Stevens and Mr. Barber.

II. Histological Botany.—Laboratory work 10 hours per week and lectures. 1st term. Every day, 8 to 10 and 10 to 12. *Sophomore alternative.* Professor Stevens.

III. Cryptogamic Botany.—Laboratory work 10 hours per week and lectures. 1st term. Every day, 3 to 5. Open to students who have taken course I. Mr. Barber.

IV. Physiological Botany.—Laboratory work 10 hours per week and lectures. 2d term. Every day, 8 to 10. Open to students who have taken courses I and III. Professor Stevens.

V. Advanced Botany.—Special laboratory course. Ten weeks,

10 hours a week, by appointment. Open to students who have taken courses I and II. Mr. Barber or Professor Stevens.

VI. Fungi, Bacteria, and the lower forms especially.—1st term (*a*), 3 to 5. Mr. Barber.

VII. Entomology.—Introductory laboratory course in anatomy. 1st term. Ten hours a week, 1 to 3. Mr. Hunter.

VIII. Entomology.—General course, lectures, laboratory work, field exercises. Special attention to insects of economic importance in Kansas. Ten hours a week. 2d term, 3 to 5. Mr. Hunter.

IX. Entomology.—Teachers' course. Lectures, field exercises. Special attention to life-histories. Intended especially as an introduction to nature study in high schools. 2d term. Every day, at 2. Mr. Hunter.

X. Entomology.—Special laboratory course. Thesis work in anatomy, classification, or life-histories. Ten hours a week, by appointment, for entire year. Course X must be preceded by course VII. This course is especially adapted for graduate work. Mr. Hunter.

XI. Invertebrate Zoölogy.—1st term. Ten hours a week. 3 to 5. Mr. Hunter.

2.—Zoology and Anatomy.

I. Zoölogy.—Packard's Advanced Course and Jordan's Manual of Vertebrates. Lectures and laboratory work. *Freshman and Sophomore alternative*. 2d term. Every day, 1 to 3. Professor Dyche.

II. Comparative Anatomy.—1st term. Laboratory work. Every day, 1 to 3. Professor Dyche and Mr. Gowell.

3.—Historical Geology and Physiology.

I. Historical Geology.—Lectures. Dana's Manual, 4th edition. 1st term (*b*). Every day, at 11. Must be preceded by zoölogy, or its equivalent. Professor Williston.

II. Systematic Paleontology.—Lectures and laboratory work. Zittel's Handbook. 2d term. Every day, at 4. Must be preceded by course I, or its equivalent. Professor Williston.

III. Histology.—2d term. Laboratory work and lectures. Every day, 2 to 4. Professor Williston and Mr. McClung.

IV. Physiology.—1st term. Lectures. Martin's Human Body. Every day, at 10. Professor Williston.

V. Special Work in Vertebrate Anatomy, Recent or Fossil.—Throughout the year, at the option of the instructor. For graduates only. Professor Williston.

VI. Field Work in Paleontology.—For advanced students only.

Such work, if sufficiently meritorious, will be credited as equal to one study pursued in the University for double the length of time spent in the field. Summer months. Professor Williston.

4.—*Physical Geology, Mineralogy, and Petrography.*

I. Elements of Mineralogy and Petrography.—Daily lectures and laboratory work. An elementary course, including crystallography. blowpipe analysis, and the study of building stone. 1st term. Every day, 9 to 11. Professor Haworth.

II. Systematic Mineralogy.—Daily lectures and laboratory work. To follow I. 2d term (*a*). Every day, at 11. Professor Haworth.

III. Elementary Petrography.—Daily lectures and laboratory work. To follow I, and may follow II, or be taken as a parallel study. 2d term (*a*). Every day, 1 to 3. Professor Haworth.

IV. Elements of Physical Geology.—Daily lectures. An elementary course preliminary to elements of historical geology. 1st term (*a*). Every day at 3. Professor Haworth.

V. Economic Geology.—Daily lectures. (Must be preceded by I or II, or an equivalent.) 2d term (*a*). Every day, 3 to 5. Professor Haworth.

Field work in geology and mineralogy, as described under IV, graduate courses, may be begun by undergraduate students who are sufficiently advanced. It is very desirable that students working in this group elect a portion of the work offered by the department of historical geology and anatomy, or the 10-weeks course in assaying given by the department of chemistry.

Graduate Courses.—For graduate students of this and other institutions who have completed the undergraduate work in groups 3 and 4, as described above, or its equivalent:

I. Advanced Mineralogy.—Lectures and laboratory work. For students who have completed I and II, in group 4, or their equivalent. 1st term and 2d term (*a*). By appointment. Professor Haworth.

II. Advanced Petrography.—Lectures and laboratory work. For students who have completed I, II, and III, in group 4, or their equivalent. 1st term and 2d term (*a*). By appointment. Professor Haworth.

III. Dynamic Geology.—Daily lectures. This course is adapted for advanced students only, especially those who are preparing themselves for teachers of geology. 1st term (*b*). By appointment. Professor Haworth.

IV. Field Work in Geology, Mineralogy, and Petrography.—For advanced students only. At present, work in geology will be confined to Kansas; but work in the other branches may be done elsewhere. Each student will be given a special area or problem to investigate, under the advice and assistance of the head of the department. Such

field work, if sufficiently meritorious, will be credited as equal to one study pursued in the University for double the length of time actually spent in the field. Spring term (*b*) and summer months. Professor Haworth.

5. — *Chemistry.*

I. Chemistry.—Study of chemical elements and their compounds. Remsen's Briefer Course in Chemistry. Experimental lectures. Laboratory work one afternoon a week, from 1 to 3. *Required of Freshmen.* 2d term (*b*). Every day, at 8 or 10. Professor Bailey.

II. Qualitative Analysis.—Bailey's Laboratory Guide to the Study of Qualitative Analysis. One lecture a week and laboratory work daily. 1st term. Every day, 9 to 11. Professor Bailey and Mr. Cady.

III. Quantitative Analysis.—Fresenius's or Talbot's Quantitative Analysis. Laboratory work 10 hours per week, at the convenience of the instructor and student. Either 1st or 2d term. 1st term, Professor Bailey. 2d term, Professor Franklin.

IV. Quantitative Analysis.—The last half of this term may be devoted to some special topic, as water analysis, iron analysis, or sugar analysis. Laboratory work 10 hours per week, at the convenience of the instructor and student. Either 1st or 2d term. 1st term, Professor Bailey. 2d term, Professor Franklin.

V. Inorganic Chemistry.—Remsen's Advanced Course. 1st term. Every day, at 8. Professor Bailey.

VI. Organic Chemistry.—Remsen's Organic Chemistry and Orndorff's Manual. Lectures Monday, Wednesday, and Friday, at 4. Laboratory work Tuesday and Thursday afternoons. 2d term. Professor Franklin.

VII. Toxicology.—Lectures. 1st term (*b*). Every day, at 10. Professor Bailey.

VIII. Assaying.—Laboratory work 10 hours a week. Brown's Assaying. 2d term (*a*). At convenience of instructor. Professor Franklin.

IX. Organic Preparations.—Laboratory work in organic chemistry. 1st and 2d terms. Ten hours per week, at the convenience of the instructor. Professor Franklin.

X. Sanitary and Applied Chemistry.—Study of air, potable waters, fuels, disinfectants, foods and their adulterations, methods for preserving and cooking food products, chemical processes of digestion, etc. Lectures, themes, and laboratory demonstrations. Counting as a full study. 2d term. Tuesday, Thursday, and Friday, at 9. Professor Bailey.

XI. The Chemistry of Sugar Manufacture.—2d term (*b*). Every day, from 3 to 5. Professor Franklin. This course should be preceded by quantitative analysis.

6.—Civil Engineering.

I. Analytical Mechanics.—1st term. Every day, at 11. Mr. Murphy.

II. Resistance of Materials.—2d term. Every day, at 10. Mr. Murphy.

III. Mechanics of Fluids.—1st term (*a*). Every day, at 10. Mr. Murphy.

IV. Roofs and Bridges.—1st term. Every day, from 2 to 4. Professor Marvin.

V. Engineering Design.—2d term. Every day, from 2 to 4. Professor Marvin.

VI. Surveying.—*Sophomore alternative*. 2d term. Every day, at 10. Professor Marvin.

VII. Field Engineering.—1st term. Every day, at 8. Professor Marvin.

VIII. Location of Railways.—First three-fifths of the 2d term. Every day, at 9. Professor Marvin.

IX. Roads and Pavements.—Last two-fifths of the 2d term. Every day, 9. Mr. Murphy.

X. Sanitary Engineering.—1st term (*b*). Every day, at 11. Professor Marvin.

XI. Water Supply.—2d term (*a*). Every day, at 11. Mr. Murphy.

XII. Masonry.—1st term (*a*). Every day, at 9. Professor Marvin.

XIII. Irrigation.—2d term. Every day, at 3. Mr. Murphy.

XIV. Geodesy.—1st term. Every day. Professor Marvin.

7.—Physics.

I. Mechanics, Sound, and Static Electricity.—Lectures and experimental demonstrations. Laboratory work three hours a week. 1st term. Four days, at 11. Professor Blake, Mr. Dunstan, and Mr. Rice.

II. Electricity and Magnetism, Heat and Light.—Lectures and experimental demonstrations. Laboratory work three hours a week. 2d term. Four days, at 11. Professor Blake, Mr. Dunstan, and Mr. Rice.

* III. Heat.—Advanced laboratory work 10 hours a week. 1st term. Every day, at 2. Professor Blake and Mr. Dunstan.

* IV. Optics.—Advanced laboratory work 10 hours a week. 2d term. Every day, at 2. Professor Blake and Mr. Dunstan.

* V. Electricity.—Application of Ohm's law. Laboratory work 10 hours a week. 1st term. Every day, at 2. Professor Blake, Mr. Dunstan, and Mr. Rice.

* VI. Mechanics and Sound.—Laboratory work 10 hours a week. 2d term. Every day, at 2. Professor Blake and Mr. Dunstan.

* VII. Dynamo-electric Machinery. Direct-current Generators and Motors.—2d term. Every day, at 9. Professor Blake.

* VIII. Thermo-dynamics, including the Theory of and Practice with the Steam-engine Indicator. Steam-engines and Boilers with several Practical Tests in Efficiency and Duty.—1st term. Every day, at 10. Professor Blake.

* IX. Mathematical Theory of Electricity and Magnetism, with special reference to the principles involved in Accurate Measurements of Resistances, Capacities, and Induction Coefficients.—1st term. Every day, at 9. Mr. Rice.

X. Electrical Measurements.—2d term. Every day, at 10. Mr. Dunstan.

XI. Theory of Alternating Currents.—This course treats of the general equations for current in circuits containing resistance, self-induction, and capacity, and the effects of variation of constants. It is intended to develop the mathematical treatment of the subject. Every day, at 11. Mr. Rice.

Physics III, IV, V, VI, must be preceded by physics I and II.

8.—*Mathematics and Astronomy.*

Mathematics.

I. Algebra.—Wells. 1st term, to Christmas vacation. Every day, at 8, 9, and 10. *Required of all Freshmen.* Professor Miller, Professor Newson, and Mr. Rice.

II. Trigonometry.—Miller. From Christmas vacation to middle of second term. Every day, at 8, 9, and 10. *Required of all Freshmen.* Professor Miller, Professor Newson, and Mr. Rice.

III. Analytic Geometry.—*Sophomore alternative.* 1st term. Every day, at 8. Must be preceded by I and II. Professor Newson.

IV. Calculus.—Osborne. *Sophomore alternative.* 2d term. Every day, at 8. Must be preceded by III. Professor Miller and Professor Newson.

V. Modern Geometry.—Scott. 2d term. Every day, at 11. Must be preceded by III. Professor Newson.

VI. Theory of Equations.—Burnside and Panton. 1st term. Every day, by appointment. Must be preceded by III and IV. Professor Miller.

VII. Advanced Calculus.—Williamson. 2d term. Every day, at 11. Must be preceded by IV. Professor Newson.

VIII. Differential Equations.—1st term. Every day, at 11. Must be preceded by IV. Professor Newson.

Courses V and VI are given in alternate years with courses VII and VIII. V and VI will be given in 1897-'98.

Graduate Courses.

The department offers the following courses which students are advised not to attempt until they have completed all of the above courses :

IX. Theory of Functions and Elliptic Functions.—1st term. Every day, by appointment. Professor Newson.

X. Theory of Curves and Surfaces.—Salmon. 2d term. Every day, by appointment. Professor Newson.

XI. Quaternions.—Hardy. 1st term. Every day, at 12. Professor Miller.

Astronomy.

I. Descriptive Astronomy.—Lectures and recitations, with occasional evenings for observation. Young's Astronomy. 1st term. Every day, at 11. Professor Miller.

II. Practical Astronomy, including the Theory of Least Squares.—Use of a sextant and transit instrument, determinations of time, latitude and longitude, etc. Doolittle's Practical Astronomy or Barlow and Bryan's Mathematical Astronomy. 2d term. Every day, at 11. Must be preceded by astronomy I, and by mathematics III and IV. Professor Miller.

9.—Philosophy.

I. Elementary Logic and Psychology.—*Sophomore alternative*. 2d term. Every day, at 10. Professor Templin.

II. Experimental Psychology.—1st term. Every day, at 3. Professor Templin.

III. Ethics.—1st term. Every day, at 2. Professor Templin.

IV. History of Philosophy.—2d term. Every day, at 11. Professor Templin.

V. Advanced Logic.—2d term (a). Every day, at 9. Professor Templin.

VI. Metaphysics.—2d term (b). Every day, at 9. Professor Templin.

VII. Æsthetics.—1st term (b). Every day, at 4. Professor Templin.

10.—*Sociology and Political Economy.*

I. Sociology (dynamic and descriptive).—1st term. Every day, at 1. Professor Blackmar.

II. Advanced Political Economy (theory and history).—1st term. Every day, at 2. Professor Blackmar.

III. Elements of Political Economy.—1st term. Every day, at 3. Professor Blackmar.

IV. Questions in Practical Sociology.—2d term. Every day, at 1. Professor Blackmar.

V. Unsettled Questions in Economics (with statistics).—2d term. Every day, at 3. Professor Blackmar.

VI. Money and Banking.—2d term (*a*). Every day, at 2. Professor Blackmar.

VII. Taxation.—2d term (*b*). Every day, at 2. Professor Blackmar.

VIII. Economic Seminary for Advanced Students in Political Economy and Sociology. Meets in Spooner library Mondays, at 7:30 P. M.

Advanced Courses.

I. Economics.—Open to graduates and to students who have taken undergraduate courses III, V, VI, and VII. A seminary will be conducted in connection with this course, which will meet regularly once each week. Professor Blackmar.

II. Political and Social Institutions.—Open to graduates, and to students who have taken undergraduate courses I, and IV in sociology, and courses III, and VII in European history. Professors Blackmar and Adams.

11.—*European History.*

I. English History.—*Sophomore alternative*. 1st term. Every day, at 10, 2, and 4 (three sections). Professor Adams and Mr. Price.

II. French and German History.—1st term. Every day, at 9. Professor Adams.

III. History of Institutions.—1st term. Every day, at 11. Professor Adams.

IV. Renaissance and Reformation.—2d term. Every day, at 9. Professor Adams.

V. Federal Government and the French Revolution.—2d term. Every day, at 10. Professor Adams.

VI. Political History of Modern Europe.—2d term. Every day, at 11. Professor Adams.

VII. English Constitutional History.—2d term (*a*). For advanced students. Hours by appointment.

12.—American History and Administration.

I. Colonial History, 1492-1763.—1st term (*a*), at 2. Professor Hodder.

II. The Revolution and Confederation.—1st term (*b*), at 2. Professor Hodder.

III. Constitutional Law.—2d term (*a*), at 2. Not necessarily preceded by either course I or II. Professor Hodder.

IV. International Law.—2d term (*b*), at 2. Professor Hodder.

V. Presidential Administrations—Washington to Jackson.—1st term at 3. Open to Seniors, and to other students who have passed course III creditably. Professor Hodder.

VI. Presidential Administrations—Jackson to Lincoln.—2d term, at 3. Continuation of course V. Professor Hodder.

VII. History of Financial and Tariff Legislation in the United States.—2d term (*a*), at 4. Open to students who have passed one term in political economy. Professor Hodder.

VIII. State and Municipal Government.—2d term (*b*), at 4. Professor Hodder.

IX. American Historical Seminary.—Open to graduates, and to students who have passed courses III, V, and VI. Hours by appointment. Professor Hodder.

Seminary of Historical and Political Science.

General Seminary, throughout the year, at 4. For all students of the departments of History and of Sociology and Political Science.

13.—Greek.

I. Elementary Greek.—Gleason and Atherton's or White's First Greek Book. 1st term. Every day, at 11. *For Freshmen or Sophomores who enter without Greek.* Mr. Sterling.

II. Continuation of Course I.—Xenophon's Anabasis. 2d term. Every day, at 11. Mr. Sterling.

III. Homer. Seymour's School Iliad, six books. Jebb's Introduction to the Iliad and Odyssey.—Sight-reading in the New Testament. 1st term. Every day, at 9. For Freshmen who have entered with elementary Greek and the Anabasis, or Sophomores, Juniors or Seniors who are prepared for it. Professor Wilcox.

IV. Morgan's Eight Orations of Lysias.—Exercises in prose composition. Sight-reading in the New Testament. 2d term. Every day, at 9. To follow course III. Mr. Sterling.

V. Plato's Apology and Crito. The Philippics of Demosthenes.—Exercises in prose composition. Sight-reading. 1st term. Every day, at 9. Open to all who have taken courses III and IV, or their equivalents. Mr. Sterling.

VI. The *Antigone* of Sophocles, *Iphigenia* among the Taurians of Euripides, and *Prometheus* of Æschylus.—Lectures on the Greek theater. Sight-reading. 2d term. Every day, at 9. Open to all those who have taken courses III and IV, or their equivalents. Professor Wilcox.

VII. Aristophanes: *Clouds*, *Acharnians*, *Frogs*, and *Birds*.—Lectures and private reading on Comedy and Attic History. 1st term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1896-'97. Mr. Sterling.

VIII. Homer's *Iliad*.—Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 2d term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1896-'97. Professor Wilcox.

IX. Homer's *Odyssey*.—Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 1st term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1897-'98. Professor Wilcox.

X. Plato: *Gorgias*, *Phædo*, and Purvis's *Selections*.—Critical interpretation of the first, rapid reading of the rest. Lectures and private reading on Plato and Greek philosophy. 2d term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1897-'98. Professor Wilcox.

XI. The Greek in English.—The elements of Greek, with especial reference to English. This course covers the elements of inflection and syntax, and serves as an introduction to the following course. 1st term. Every day, at 10. Open to Juniors and Seniors who have had no Greek. Mr. Sterling.

XII. Attic Greek.—Stories and legends and selections from prose authors. Translation: so much grammar only as is required by the text read. 2d term. Every day, at 10. Open to Juniors and Seniors who have taken course XI. Mr. Sterling.

XIII. History of Greek Literature, through translations.—Lectures, recitations, private reading, writing of themes. 2d term. Every day, at 11. Open to all Juniors and Seniors. Professor Wilcox.

XIV. History of Greek Art.—Recitations, lectures, private reading, writing of themes. 1st term. Every day, at 11. Open to all Juniors and Seniors. Professor Wilcox.

XV. History of the Drama.—Lectures, private reading, writing of themes. 1st term. Every day, at 1. Open to all Juniors and Seniors. Professor Wilcox, in conjunction with Miss Oliver, and Professors Dunlap, Canfield, and Carruth.

Greek Symposium.—All Greek students in the University meet once a fortnight in a united class to listen to lectures on subjects of

more general interest than special class work, or of such a character as to need a larger amount, or different kind, of illustrative material than is available in the class room. The subjects the last four years have been Greek Architecture and its continuation and revival in later and modern times, Greek Sculpture, famous Greek sites and scenes, and the latest excavations on Greek soil; all illustrated by stereopticon slides.

14.—*Latin.*

I. Livy (two books).—Class work: Critical reading, twice a week; rapid reading, once a week; prose composition based on the text read, once a week; grammar and sight-reading, alternately, once a week. Private reading: Cæsar, *Bellum civile*, book I. 1st term. *Open to Freshmen.* Every day, at 11. Miss Oliver.

II. Horace (Odes).—Class work: Critical reading, twice a week; rapid reading, once a week; prose composition, prose equivalents of certain selections read, once a week; grammar and sight-reading, alternately, once a week. Private reading: Cicero, *De Senectute*. 2d term. *Open to Freshmen.* Every day, at 11. Miss Oliver.

III. Plautus (selected plays), or Pliny's Letters (selections).—Class work: Critical reading, twice a week; rapid reading, once a week; prose composition based on a Latin text, once a week; grammar and sight-reading, alternately, once a week. Private reading: Cicero's Letters. 1st term. *Open to Sophomores.* Every day, at 2. (Given in 1896-'97.) Professor Holmes.

IV. Horace (Satires), or Lyric Poets (selections).—Class work: Critical reading, twice a week; rapid reading, once a week; prose composition based on a Latin text, once a week; grammar and sight-reading, alternately, once a week. Private reading: Ovid (selections). 2d term. *Open to Sophomores.* Every day, at 2. Professor Holmes.

V, VI, VII, VIII. Seminary: Advanced Work in Latin.—This work proceeds with the double aim of fitting for post-graduate study and for the practical work of Latin instruction. Method, departmental. Work varied each year. Department studied in 1896-'97, Roman Satire, with Juvenal as a center. Department selected for study for 1897-'98, Roman Historians; 1898-'99, Roman Comedy. Center of work for first term, Tacitus; for second term, Livy and Salust. Critical reading, once a week; rapid reading, once a week; practical exercises in turning Latin into English and English into Latin at hearing, once a week; critical interpretation of selected portions of the author's text by the aid of some of the leading editions and other authorities, constituting an introduction to the use of critical methods and apparatus, once a week; lectures on Roman historians, once a week. Tests in prose composition will be set regularly throughout the whole course of the work. 1st and 2d terms.

Open to Juniors and Seniors who have had courses I, II, III, and IV, or their equivalents. Every day, at 4. Professor Holmes.

IX, X. Comparative Philology.—Class work: Elementary Sanskrit, exercises in grammar and the reading of an easy text, twice a week. Lectures: Linguistic science, once a week; comparative grammar, once a week. 1st and 2d terms, at 5. Open to qualified students, upon consultation with the instructor. Professor Holmes.

XI. History of Roman Drama.—Course extending over three weeks, and given in conjunction with the other language departments of the University. 1st term. Every day, at 2. Miss Oliver.

Detailed statement of courses, scholarships, methods and apparatus sent on application to the head of the department.

15.—German.

I*. Outline of Grammar (Otis), with Composition Exercises.—Brandt's Reader. 1st term. Every day, at 9 and 11. Mr. Engel and Miss Scott.

II. Brandt's Reader (completed), Wilhelm Tell.—Also sight-reading. 2d term. Every day, at 9 and 11. Mr. Engel and Miss Scott.

III. Karl der Grosse, Die Journalisten, Burg Neideck.—Sight-reading. 1st term. Every day, at 8 and 9. Mr. Engel and Miss Scott.

IV. Wallenstein (complete).—2d term. Every day, at 9 and 11. Mr. Engel and Miss Scott.

V. (a) Composition, Translation of Connected English (Howell's Farces or Harris's Composition), half course. Mr. Engel. (b) Faust (Part I), half course.—1st term. Every day, at 11. Professor Carruth.

VI. Nathan der Weise, Ekkehard.—2d term. Every day, at 11. Professor Carruth.

VII. German Literature of the Eighteenth Century.—Lectures, with reading of masterpieces out of class, with comment on more difficult works in class. Essays and criticism, by members of the class. Klopstock, Wieland, Lessing, Herder. 1st term. Every day, at 10. Open only to students who have had German III, IV. Not given in 1897-'98. Professor Carruth.

VIII. German Literature of the Eighteenth Century (continued).—Goethe, Schiller, and the close of the century. 2d term. Every day, at 10. Not given in 1897-'98. Professor Carruth.

IX. German Historical Novels.—Hauff, Scheffel, etc. Careful reading in class of one work by each author, others rapidly outside.

*The full three years of Latin for entrance is required as preparation to German I. .

Lectures on the history of the novel and on methods and schools in fiction. Theses on separate authors and on the whole course, by members of the class. 1st term. Every day, at 10. Professor Carruth.

X. German Historical Novels (continued).—Freytag, Dahn, etc. 2d term. Every day at 10. Professor Carruth.

XI. Teachers' Course.—Advanced grammar, with theory and practice of language teaching. Full course. Intended especially for those who desire to fit themselves for teaching German in high schools. 1st and 2d terms. Every day. Hour not set. Professor Carruth and Mr. Engel.

XII. History of the Drama.—Lectures and readings. A course conducted by the instructors in Greek, Latin, English, French, and German, giving a view of this field of literature in five languages. 1st term. Every day, at 1.

XIII. Gothic.—Phonetics and introduction to Germanic Philology. 1st term. Every day, at 2. Professor Carruth.

XIV. Luther.—Reading and grammatical study of the German literature of the Reformation. 2d term. Every day, at 9. Professor Carruth.

16.—French.

I. Grammar (Van Daell and Grandgent) and Reader (Super).—Drill in forms and elementary syntax. Elementary composition and dictation. 1st term. Every day, at 9 and 11. Professor Canfield and Miss Galloo.

II. Grammar and Simple Prose Texts (Mlle. de la Seiglière; Roman d'un jeune homme pauvre).—Follows I. 2d term. Every day, at 9, 10, and 11. Professor Canfield, Miss Galloo, and Miss Scott.

III. Modern French Prose of Mérimée, Gautier, Hugo, Daudet, Pailleron, and others.—Rapid reading for acquirement of vocabulary, and advanced syntax. Dictation and practice in writing. 1st term. Every day, at 9. Professor Canfield.

IV. The Classic Drama.—Plays of Corneille and Racine. Dictation and practice in writing. 2d term. Every day, at 9. Professor Canfield.

V. Molière (one-half term). French Composition and Conversation (one half term).—1st term. Every day, at 11. Miss Galloo.

VI. The Seventeenth Century.—Fables, letters, memoirs, novels, sermons, satires. 2d term. Every day, at 11. Professor Canfield.

VII. The Romantic School: 1800–1835.—A. de Vigny, Chateaubriand, Lamartine, Hugo, A. de Musset. 1st term. Every day, at 9. Professor Canfield.

VIII. The Development of the Novel.—Hugo, George Sand, Balzac. 2d term. Every day, at 10. Professor Canfield.

IX. Advanced Composition.—Daily exercises in writing and speaking French. 2d term. Given in 1897-'98. Every day, at 11. Miss Galloo.

X. History of French Literature.—Lectures, recitations, and private readings. 2d term. Not given in 1897-'98. Every day, at 11. Miss Galloo.

XI. History of the Drama.—In conjunction with Professors Wilcox, Holmes, Dunlap, and Carruth. 1st term. Every day, at 1.

17.—English.

A.—English Literature.

I. History of English Literature.—Pancoast's Introduction to English Literature; lectures on English language history. 2d term. Every day, at 8 and 10. *Required of all Freshmen except those admitted with three years of English.* Mr. O'Leary.

II. Eighteenth Century Literature.—Gosse's History of Eighteenth Century Literature; Hale's Longer English Poems. 2d term. Every day, at 9 and 11. *Sophomore alternative.* Mr. Jones.

III. Bacon and Milton.—Bacon's Essays, or Advancement of Learning; Milton's Minor Poems and Paradise Lost. 1st term. Every day, at 10. Mr. Jones.

IV. Shakespere.—Three plays. 1st term. Every day, at 10. Professor Dunlap.

V. Shakspere. Three plays. 2d term. Every day, at 10. Professor Dunlap.

VI. American Literature.—Philosophy and criticism. Lectures, recitations, reports upon authors read, and discussions. 1st term. Every day, at 9. Professor Hopkins.

VII. Chaucer and Spenser.— 2d term. Every day, at 11. Professor Dunlap.

VIII. English Literature of the Nineteenth Century.— 1st term. Every day, at 11. Professor Dunlap.

IX. History of the Drama.—Lectures and readings. 1st term. Every day, at 1. Course conducted by the instructors in Greek, Latin, English, French, and German.

X. Invention and Critical Analysis.—Study of special forms of literature, development, methods, and theories, with practice in invention. For advanced students only; should be preceded by English B VI, and by at least two terms of English literature besides I and II. 1st term. Every day, at 11. Professor Hopkins.

All courses except I and II are Junior and Senior optionals, and are open only to those who have completed courses I and II, or their equivalent.

B.—Rhetoric and English Language.

I.—Rhetoric.—Genung's Outlines of Rhetoric; English composition, with themes and exercises. 1st term, every day, at 8 and 11. *Required of all Freshmen except those admitted with three years of English.* Mr. Jones and Mr. O'Leary.

II. Anglo-Saxon.—Bright's Anglo-Saxon Reader. 1st term. Every day, at 9. Professor Dunlap.

III. Anglo-Saxon.—Bright's Anglo-Saxon Reader. 2d term. Every day, at 9. Professor Dunlap.

IV. Middle English.—Morris's Specimens of Early English, part I. 1st term. Every day, at 10. Professor Hopkins.

V. Middle English.—Morris and Skeat's Specimens of Early English, part II; Skeat's Piers Plowman. 2d term. Every day, at 11. Professor Hopkins.

VI. Advanced English Composition.—Lectures, exercises, theses; practical and individual criticism as to structure and style of each student's written work. 2d term. Monday, Wednesday, and Friday: Lecture, at 8; seminary, at 9. Counts as a full study. Professor Hopkins and Mr. O'Leary.

VII. Teachers' Course in Language and Rhetoric.—Lectures on English philology, practical training in the criticism of manuscript, study of methods of teaching composition. To be preceded by English B VI. 2d term. Every day, at 10. Professors Dunlap and Hopkins.

All courses except I are Junior and Senior optionals, and should be preceded by course I, and by courses I and II in English literature. Courses II, III, IV and V should be preceded by courses I and II in German, or their equivalent; and courses IV and V should be preceded by courses II and III.

Sophomore Requirements.—Of each member of the Sophomore class are required in each term three themes* of not less than 1,000 words each. These themes will be due on the following dates: First term, October 8, November 12, December 10, 1897; second term, February 11, March 18, April 22, 1898.

Junior and Senior Requirements.—Of each member of the Junior and Senior classes are required in each term two theses* or forensics of not less than 2,000 words each. These papers will be due on the following dates: First term, October 15, December 3, 1897; second term, February 25, April 22, 1898.

*For lists of subjects and full instructions with reference to the preparation and presentation of themes, theses, and forensics, see the bulletin issued by the department.

Lectures on Forensics.—During the first half of the first term, a course of six lectures on forensic structure and style, accompanied with illustrative exercises, will be given weekly. Attendance will be required of Juniors, and will excuse from the first forensic of the term.

C.—Elocution and Oratory.

I. The Elements of Vocal Expression.—Required of all Freshmen not electing vocal music. 1st term. Every Monday, at 2. Mrs. Clark.

II. Action in Oratory.—Criticism of orations and declamations. Required of all Freshmen not electing vocal music. 2d term. Every Monday, at 2. Mrs. Clark.

III. Oratory.—Practical training in the preparation and delivery of orations. Open to Sophomores, Juniors, and Seniors. 1st term. Every Friday, at 2, or at hours for private rehearsal to be arranged with the instructor. Mrs. Clark.

18.—Pharmacy.

I. Physiological Chemistry and Urinalysis.—Laboratory work and lectures. 2d term (*a*). Every day, 8 to 10. Professor Sayre.

II. Pharmacy and Pharmacognosy: Pharmacy.—1st term (*a*). Every day, at 9. Pharmacognosy.—1st term (*b*). Every day, at 9. Mr. Wagner.

III. Materia Medica and Therapeutics.—2d term. Monday, Wednesday, and Friday, at 10. Professor Sayre.

The above optionals are offered especially to those students in the School of Arts who are preparing themselves for the study of medicine.

19.—Pedagogy.

I. History of Education.—2d term. Every day, at 4. Professor Olin.

II. School Law.—1st term (*a*). Every day, at 3. Professor Olin.

III. Philosophy of Education.—1st term (*b*). Every day, at 3. Professor Olin.

IV. School Management.—2d term (*a*). Every day, at 3. Professor Olin.

V. Methods of Instruction.—2d term (*b*). Every day, at 3. Professor Olin.

VI. School Supervision.—Open to students who have taken courses IV and V. 1st term (*a*). Every day, at 10. Professor Olin.

VII. A Comparative Study of Educational Systems.—Open to students who have taken course I. 1st term (*b*). Every day, at 10. Professor Olin.

VIII. Educational Theory.—A critical study of the educational doctrines found in the writings of Plato, Comenius, Locke, Rousseau, Pestalozzi, and Spencer. Open to graduates and students who have taken courses I and III. 2d term. Every day, at 10. Professor Olin.

IX. Seminary.—Original investigation of special subjects. Open to graduates and students who have taken courses I and III. 2d term. Hours by appointment. Professor Olin.

20.—*Music.*

I. Contrapuntal Harmony.—Monday and Thursday, at 11. Professor Penny.

II. Musical Composition.—Monday and Thursday, at 9. Professor Penny.

III. History of Music and the Fine Arts.—Wednesday, at 2:30. Professor Penny.

21.—*Spanish.*

I. Grammar, Reading, and Elementary Composition.—1st term. Every day, at 10. Miss Galloo.*

II. Rapid Reading, mainly in modern authors (P. A. de Alarcon, Galdos, Hartzenbusch, Juan Valera, Fernan Caballero, L. F. de Moratin).—2d term. Every day, at 10. Miss Galloo.

22.—*Organic Evolution.*

The Principles of Evolution.—Lectures and readings. 1st term. Every day, at 4. Chancellor Snow.

*For the present, classes in Spanish are taught by Miss Galloo, assistant in French.

First-Year Medical Course.

In order to accommodate students of the University who desire to prepare for the profession of medicine, a course of study has been arranged by the departments of pharmacy, chemistry, and natural history, and including materia medica, human physiology, and comparative anatomy (with dissections).

Requirements for Admission.

Students will be admitted to the first-year medical course who are ready for admission to the Freshman class of the School of Arts in all English studies.

Course of Study.*

First Term:

General Chemistry.—Daily, 3 to 5. Professor Franklin.

Toxicology.—Daily (*b*), 11 to 12. Professor Bailey.

Pharmacy and Pharmacognosy.—Daily, 9 to 10. Mr. Wagner.

Human Osteology and Vertebrate Anatomy.—Lectures and laboratory work. Daily, 1 to 3. Professor Dyche.

Second Term:

Physiological Chemistry and Urinalysis.—Daily (*a*), 8 to 10. Professor Sayre.

Bacteriology.—Daily (*b*), 8 to 10. Mr. Barber.

Materia Medica.—Monday, Wednesday, and Friday, 10 to 11. Professor Sayre.

Physiology.—Daily, 3 to 4. Martin's Human Body. Professor Williston.

Histology.—Daily, 1 to 3. Lectures and laboratory work. Professor Williston.

During the Junior and Senior years, the student in the School of Arts may, by availing himself of the privilege in the selection of the optional courses offered him, pursue all the above courses or their equivalents, which may be accepted by medical schools in place of the first year in their regular course in medicine.

* NOTE.—No difficulty has been experienced by students who have taken this course in obtaining admission, with proper credits, to any of the larger medical colleges of the country. Among the schools which accept the above as equivalent to the first year of *their* courses are: Rush Medical College, Chicago; Jefferson Medical College, Philadelphia; Kansas Medical College, Topeka; University Medical College, Kansas City, Mo.; University of Wooster Medical School, Cleveland, Ohio; Kansas City Medical College, Kansas City, Mo.; St. Louis Polyclinic.

The School of Law.

Faculty.

F. H. SNOW, *President.*

J. W. GREEN, *Dean,*

Evidence, Contracts, Commercial Paper, Insurance, Constitutional Law, and Corporations.

W. B. BROWNELL,

Domestic Relations and Criminal Law.

J. W. GLEED,

Real Property.

A. W. BENSON,

Pleadings and Practice.

S. A. RIGGS,

Torts, and Law of Railways.

D. M. VALENTINE,

Wills and Administration.

C. L. DOBSON,

Corporations.

DAVID MARTIN,

Equity and Equity Jurisprudence.

Outline of Work.

The design of this school is to furnish a complete course of legal instruction for persons intending to practice at the bar in any state of the union. The plan of instruction includes the principles of constitutional law, international law, mercantile law, the law of contracts, corporations, insurance, torts, domestic relations, real-property law, equity jurisprudence, evidence, pleading and practice, and criminal jurisprudence.

Experience proves that the principles of law are best taught

when those methods are followed which have been found most successful in teaching the sciences. Instruction is therefore given by daily recitations upon assigned portions of text-books, and the study of selected cases, the drill of the recitation room being supplemented by lectures. In addition to their law studies, the students of this school, with the consent of the Faculty, have the privilege of recitations and lectures in the School of Arts, with access to the laboratories, library, etc., subject to the rules governing "Special Students."

The complete course includes two years, each of which occupies $8\frac{1}{2}$ months (excluding two weeks' recess at Christmas). For date of opening the school, see "Announcements."

All persons proposing to enter upon the study of law are earnestly recommended first to take a course of liberal studies. A good fundamental education is necessary to a successful study of law.

Requirements for Admission.

English, one year. See page 22.

U. S. History.

General History. See page 22.

Examinations in these subjects will be held at the University on Thursday, September 9, 1897, beginning at 9 o'clock A. M. Graduates of colleges or universities, state normal schools, accredited high schools or academies, and persons presenting first- or second-grade teachers' certificates, are admitted without examination.

Persons who have privately completed a part of the course are admitted to advanced standing in the Junior class, on satisfying the Faculty as to their qualifications. No one will be admitted to the Senior class as a regular member, except upon passing a satisfactory examination upon the requirements for admission, and also upon the work prescribed for the Junior class. Applicants for the degree of bachelor of laws must, in every case, have been admitted as regular members of the Senior class at the beginning of the Senior year, and must also have attended the Senior recitations during the entire year.

Students who are not candidates for a degree will be admitted to the school at any time, and without a preliminary examination, and will be permitted to take such work as they may desire, provided they satisfy the instructors under whom the work is taken that they are qualified to pursue it with profit.

Course of Study.

JUNIOR YEAR.

Constitutional Law—Black. Professor Green. 10 hours a week for 10 weeks.

Domestic Relations—Schouler. Professor Brownell. 6 hours a week for 6 weeks.

Contracts—Clark. Professor Green. 10 hours a week for 12 weeks.

Agency—Mechem. Professor Brownell. 10 hours a week for 6 weeks.

Bailments—Hall. Professor Brownell. 10 hours a week for 4 weeks.

Commercial Paper—Norton. Professor Green. 10 hours a week for 8 weeks.

Partnerships—George. Professor Brownell. 10 hours a week for 4 weeks.

Sales—Benjamin. Professor Brownell. 10 hours a week for 4 weeks.

SENIOR YEAR.

Torts—Bigelow. Mr. Riggs. 9 hours a week for 4 weeks.

Corporations—Taylor or Beach. Mr. Dobson. 9 hours a week for 2 weeks.

Real Property—Tiedeman, Williams, and Washburn. Professor Gleed. 9 hours a week for 4 weeks.

Evidence—Greenleaf. Professor Green. 9 hours a week for 5 weeks.

Pleadings—Bliss and Gould. Mr. Benson. 9 hours a week for 4 weeks.

Equity Pleadings—Field; and Equity Jurisprudence—Bispham. Mr. Martin. 9 hours a week for 4 weeks.

Criminal Law—May. Professor Brownell. 9 hours a week for 4 weeks.

Corporations—(lectures). Mr. Dobson. 10 hours a week for 2 weeks.

Wills—(lectures). Mr. Valentine. 10 hours a week for 2 weeks.

Recitations are so arranged that the students can go over any given subject twice, if they so desire. As a rule students of the Senior class attend the Junior recitations as well as their own.

Hours of recitation are so arranged that students, if they so desire, may enter law offices in Lawrence, attend the courts, and thus combine practical with theoretical instruction.

Moot courts are held by each class every week during the term by one of the Faculty, at each of which a cause previously assigned is taken up for practice in the conduct of causes and in the discussion of legal principles. A Kent club and other law clubs have been formed by the students, in which dissertations are read and cases argued.

Courses of lectures will be given during the term on various topics of municipal law, on medical jurisprudence, on federal practice, on criminal law, on the law of torts, on political science, and on international law, as supplementary to the general course of instruction.

Examinations.

The members of each class are examined after the completion of each topic. Those desiring admission to the Senior class may make application at the examination in September. The degree of bachelor of laws will be conferred upon such members of the Senior class as shall be recommended by the Faculty to the Board of Regents.

By an act of the legislature, the diploma entitles the graduate to admission to the bar in the state of Kansas.

The School of Fine Arts.

Music, Painting, and Elocution.

Faculty.

F. H. SNOW, *President.*

G. B. PENNY, *Dean,*

Professor of Harmony, Musical Composition, Pipe-Organ, and Lecturer upon
the History of the Fine Arts.

C. A. PREYER,

Professor of Piano.

J. A. FARRELL,

Professor of Violin, Voice Culture, and Singing.

A. H. CLARK,

Professor of Drawing and Painting.

H. F. JONES,

Instructor in English.

E. F. ENGEL,

Instructor in German.

MARY MARCHANT PIERCE-CLARK,

Instructor in Elocution, Oratory, and Physical Training.

E. GENEVE LICHTENWALTER,

Instructor in Piano.

BELLE SPENCER,

Instructor in Italian.

A. M. WILCOX,

Lecturer upon the History of Art.

This school of the University is established at Music Hall (Massachusetts street), with a corps of professors who are personally familiar with the methods employed in the conservatories and art schools of Germany, Italy, France, and England. The school is well equipped with excellent pianos, including four concert grands, and a large two-manual organ; charts for sight-reading classes, for illustrating vocal, pianoforte and lecture courses; a good collection of plaster casts, engravings, Braun autotypes, and etchings.

The school is organized to meet the demand for better and more extended facilities for liberal education in all branches of the fine arts. Its objects are: To furnish advanced instruction to either amateur or professional students; to combine music, painting, oratory, etc., with regular collegiate work, and to train teachers.

The plan of instruction includes courses in piano, voice culture, pipe-organ, artistic singing, violin, free-hand drawing, painting, modeling, decorative design, contrapuntal harmony, canon, fugue, musical composition, interpretation and conducting, history of the fine arts, the elements of form and instrumentation, oratory, Italian, German, French, physical training, elocution, and English.

Requirements for Admission to all Courses.*

Physical Geography.

General History.

History of the United States.

English.—One year.

Additional Requirements for all Music Courses.

The rudiments of music and harmony through the progression of common chords, including recognition of all intervals, scales, and chords, by ear, and the contents of Mason and Mathews' Primer of Music.

Piano.—Candidates will be required to play in tempo, and with correct touch, fingering, and phrasing, selections from the following: Loeschorn, Piano Technic (ed. Peters 1416); Bach's Preludes and Two-voiced Inventions; Heller, ops. 46 and 45. An equivalent amount of technical acquirement, excepting Bach, may be substituted, such as Tausig's Daily Studies, bk. I, or Koehler's Piano Technic; Lebert & Stark, bks. I and II; or Schmitt, op. 16; or Koehler's Etude-School; or Loeschorn, op. 66, with Heller, ops. 47, 46.

While the adoption of any particular method of technical training is not insisted upon, particular attention is called to the fact that a correct and musical rendering of the compositions accepted for examination is expected. Furthermore, the student must give evi-

* After 1897-'98, the requirements for admission will be the same as in School of Arts (see page 22), except in language, of which only three years will be required, namely, three of English, or one of English and two of either Latin, French, or German.

dence of musical talent and technical capacity to pursue the full course profitably.

Two courses are offered in piano and voice—the collegiate course, and the artists' course.

Collegiate Course in Piano.

Leading to the degree of bachelor of music.

FIRST YEAR.

First Term :

Piano, twice a week. Miss Lichtenwalter or Professor Preyer.
 Technic, once a week. Miss Lichtenwalter.
 Voice, class work, once a week. Professor Penny.
 Contrapuntal Harmony—Concords and Discords, twice a week.
 Professor Penny.
 English, (B) I. Mr. Jones.
 Seminary, Wednesdays. Professor Penny.
 Physical Training, twice a week. Mrs. Clark.
 Recitals and Ensemble playing.

Second Term :

Piano, twice a week. Miss Lichtenwalter or Professor Preyer.
 Technic, once a week. Miss Lichtenwalter.
 Voice, class work, once a week. Professor Penny.
 Contrapuntal Harmony—Modulations, Inharmonic Tones, twice a week. Professor Penny.
 Free-hand Drawing, once a week. Professor Clark.
 English, (A) I. Mr. Jones.
 Seminary. Professor Penny.
 Physical Training, twice a week. Mrs. Clark.
 Recitals and Ensemble.

SECOND YEAR.

Requirements for entrance: Grades in studies of previous year; Bach's Three-voiced Inventions; Cramer; Bulow, Etudes, selected; Haydn, Variations in F minor; Beethoven, Sonata, op. 14, No. 2, or equivalent.

First Term :

Piano, twice a week. Professor Preyer.
 Technic, once a week. Professor Preyer.
 Voice (optional), once a week. Professor Farrell.
 Contrapuntal Harmony—original work with "materials," twice a week. Professor Penny.
 German, twice a week. Mr. Engel.
 Seminary, Wednesdays. Professor Penny.
 Elocution, twice a week. Mrs. Clark.
 Recitals and Ensemble.
 Three themes.

Second Term :

Piano, twice a week. Professor Preyer.
 Technic, once a week. Professor Preyer.
 Voice (optional), once a week. Professor Farrell.
 Composition (musical forms), twice a week. Professor Penny.
 German, twice a week. Mr. Engel.
 Seminary, Wednesdays. Professor Penny.
 Elocution. Mrs. Clark.
 Recitals and Ensemble.
 Three themes.

THIRD YEAR.

Requirements for entrance: Grades in studies of previous years; Bach, Well-tempered Clavichord, vol. 1, Prelude and Fugue in D major; Clementi's Etudes (Grados), selected; Czerny, op. 740, Octave Study in G major; Beethoven, Sonata, op. 26; Mozart, Concerto in D minor, or equivalent.

First Term :

Piano, twice a week. Professor Preyer.
 Composition (applied counterpoint—invention, choral figuration), twice a week. Professor Penny.
 Seminary, Wednesdays. Professor Penny.
 Italian, twice a week. Miss Spencer.
 German (optional), twice a week. Mr. Engel.
 Oratorio, once a week. Professor Penny.
 Physical Training and Elocution (optional). Mrs. Clark.
 Recitals and Ensemble.
 Two forensics.

Second Term :

Piano, twice a week. Professor Preyer.
 Mythology and Archæology, once a week. Professor Penny.
 Composition, Fugue, Canon, twice a week. Professor Penny.
 Seminary, Wednesdays. Professor Penny.
 Oratorio, once a week. Professor Penny.
 German (optional), twice a week. Mr. Engel.
 Physical Training and Elocution (optional). Mrs. Clark.
 Recitals and Ensemble.
 Advanced English Composition.

FOURTH YEAR.

Requirements for entrance: Grades in studies of previous years; Mendelssohn, Variations Serieuses; Beethoven, Sonata, op. 31; Chopin, op. 10, Nos. 5 and 12; Kullak, Octave Study, No. 5, or equivalent.

First Term :

Piano, twice a week. Professor Preyer.
 Æsthetics and History of the Fine Arts. Professor Penny.

Composition (variation forms, rondo, sonata), twice a week.

Professor Penny.

Recitals and Ensemble.

Second Term :

Piano, twice a week. Professor Preyer.

Composition (instrumentation, string quartette, overture, cantata), twice a week. Professor Penny.

Acoustics, 15 lectures. Professor Blake.

History of Music, weekly lecture. Professor Penny.

Graduating thesis.

Graduating recital or original composition.

The work in piano, outlined in brief, is as follows: Koehler's Virtuosity Studies, Bach's Inventions, English Suites, and Well-tempered Clavichord, Carl Reinecke's School of Etudes from Cramer, Clementi, Thalberg, Moscheles, etc., Kullak's School of Octave Playing; Chopin's ops. 10, 25; Rubenstein, op. 23; Liszt's Transcendentals; concert pieces, concertos, etc.; Henselt, op. 125; Liszt, Concert Etudes.

Artists' Course in Piano.

This course is the same as the collegiate course, with the omission of the following studies: Freshman year, Free-hand Drawing, 2d term; Sophomore year, English and Elocution; Junior year, Elocution (optional); Italian; Senior year, Composition.

Requirements for graduation, a graduating recital, in place of an original musical composition.

For entrance and continuation in this course, the highest grade will be required in all piano examinations.

Artists' Course in Voice.

Leading to the degree of bachelor of music.

For entrance and continuation in this course, the highest grade will be required in all vocal examinations.

FIRST YEAR.

First Term:

Voice, three times a week. Professor Farrell.

English, (B) I. Mr. Jones.

Italian, twice a week. Miss Spencer.

Seminary, Wednesdays. Professor Penny.

Contrapuntal Harmony, twice a week. Professor Penny.

Physical Training, twice a week. Mrs. Clark.

Recitals.

Second Term:

Voice, three times a week. Professor Farrell.

Contrapuntal Harmony, twice a week. Professor Penny.

English, (A) I. Mr. Jones.

Italian, twice a week. Miss Spencer.
Seminary, Wednesdays. Professor Penny.
Physical Training, twice a week. Mrs. Clark.
Free-hand Drawing, once a week. Professor Clark.
Recitals.

SECOND YEAR.

First Term:

Voice, twice a week. Professor Farrell.
Piano Technic, once a week. Professor Preyer.
Contrapuntal Harmony, twice a week. Professor Penny.
German, twice a week. Mr. Engel.
Seminary, Wednesdays. Professor Penny.
Choir and Church Music, once a week. Professor Penny.
Elocution and Physical Training, twice a week. Mrs. Clark.
Recitals.
Three themes.

Second Term:

Voice, twice a week. Professor Farrell.
Piano Accompaniment Playing, once a week. Professor Preyer.
Composition (musical forms), twice a week. Professor Penny.
German, twice a week. Mr. Engel.
Seminary, Wednesdays. Professor Penny.
Church and Choir Music, once a week. Professor Penny.
Elocution and Physical Training, twice a week. Mrs. Clark.
Recitals.
Three themes.

THIRD YEAR.

First Term:

Voice, twice a week. Professor Farrell.
Oratorio, once a week. Professor Penny.
Composition (applied counterpoint). Professor Penny.
Piano, once a week. Professor Preyer.
Seminary, Wednesdays. Professor Penny.
Elocution and Physical Training (optional). Mrs. Clark.
Two forensics.

Second Term:

Voice, twice a week. Professor Farrell.
Opera, once a week. Professor Penny.
Composition (fugue and canon). Professor Penny.
Piano, once a week. Professor Preyer.
Advanced English Composition. Professor Hopkins.
Elocution and Physical Training (optional). Mrs. Clark.

FOURTH YEAR.

First Term:

Voice, twice a week. Professor Penny.
Oratorio, once a week. Professor Penny.
History of Music, weekly lecture. Professor Penny.
Acoustics, 15 lectures. Professor Blake.

Second Term:

Voice, twice a week. Professor Penny.
Opera, once a week. Professor Penny.
Dramatic Action. Mrs. Clark.
Æsthetics, weekly lecture. Professor Penny.
History of Music, weekly lecture. Professor Penny.
Graduating thesis.
Graduating recital.

Collegiate Course in Voice.

This course is the same as the artists' course, except that an original composition instead of recital is required for graduation.

In addition to general requirements for admission to these courses, the possession of a correct musical ear is required.

Normal Course in Public-School Music and Singing at Sight.

Two Years. The study of notation, intervals, scales, singing at sight, elementary harmony, thorough study of the system used, management of children's voices, methods of teaching the subject in graded schools, etc., combined with practical drill in the classroom. Tonic sol-fa and staff notation are both used.

The first year's work is an optional with elocution, required of all Freshmen and Sophomores in the School of Arts.

The second year consists of private instruction in voice culture, in connection with class work in harmony, seminary and oratorio.

Course in Violin.

This course is the same as the course in piano, with the exception that violin is substituted throughout for piano.

FIRST YEAR.

Herman's Violin School, vol. I.

Wichtl School, book I.

Kayser, 36 studies, book I.

Duets and compositions by Daube, Dancla, Bruni, Herman, Pleyel, and Kron.

SECOND YEAR.

Herman's Violin School, vol. II.

Kayser, 36 studies, books II and III.

Dont, Gradus ad Parnassum.

Schradieck, technic.

Viotti and Dancla, duets.

Fantasies and compositions, by Singelee, Leonard, Papini, Herman, Alard, and De Beriot.

THIRD YEAR.

Bendix, scale studies.

Schradieck, scales and technic.

Kreutzer, 40 studies.

Fiorrillo, 36 studies.

Mazas, artistic duets.

Concert studies and compositions by Leonard, Papini, David, De Beriot, Sauret, Viotti, Rode, and Kreutzer.

FOURTH YEAR.

Rode, 36 studies.

Dancla, 20 studies.

De Beriot concerts.

Mendelssohn concert.

Sauret and David concert pieces.

Wieniawski concert pieces.

Spohr concerts.

Vieuxtemps concert pieces.

Beethoven concert.

Bruch concert.

Sarasati.

Course in Pipe-Organ.

This course is identical with the artists' course in piano, with the exception that pipe-organ is substituted for piano during the third and fourth years.

The following constitutes the special work on the organ :

THIRD YEAR.

Organ.—Manual and Pedal Studies, Dr. John Stainer (London); Dudley Buck's Choir Accompaniment; Bach's Easy Preludes and Fugues; Buck's Study in Pedal Phrasing; selections from "Church and Concert Organist," Eddy, "The Organist," Whiting, etc. Twice a week.

Choir Drill and Accompaniment. Once a week.

FOURTH YEAR.

Organ.—Extempore playing, Bach's fugues; sonatas by Mendelssohn, Merkel, and Bach; accompaniments for solos, masses, cantatas, and oratorios; compositions by Best, Guilman, Eddy, Ritter, Saint-Saëns, Thiele, Widor, etc. Twice a week.

Course in Drawing and Painting.

Leading to the degree of B. P. (bachelor of painting).

The additional requirements for admission to this course will consist of an examination of the pupil's ability as a draughtsman.

Those who are deficient in entrance requirements or whose time is limited may enter as special students. The work is the same as the regular course, omitting English, German, and voice.

FIRST YEAR.

Drawing in Charcoal from Solid, every day. Professor Clark.

English, (B) I. Mr. Jones.

Physical Training, twice a week. Mrs. Clark.

Seminary, Wednesdays.

First Steps in Perspective, Clay Modeling. Professor Clark.

Voice, class work. Professor Penny.

SECOND YEAR.

Drawing from Cast, Figure, Head, Interior, every day. Professor Clark.

English, (A) I. Mr. Jones.

German, twice a week. Mr. Engel.

Elocution, twice a week. Mrs. Clark.

Seminary, once a week.

Water Color — studies from still life and drapery.

Decorative Design.

Anatomy — perspective, composition, arrangement.

Sketching from Nature, in black and white — landscape, animals. Professor Clark.

Physical Training. Mrs. Clark.

THIRD YEAR.

Oil, Pastel and Water-Color Studies, from fruit, game, still life, drapery, and interior.

Mythology and Archæology. Professor Penny.

Comparative Anatomy. Professor Dyche.

Seminary.

Original Compositions in black and white.

Pen Drawing.

Charcoal — portraits, heads, and figure studies.

Sketching from Nature and Color.

Physical Training. Mrs. Clark.

FOURTH YEAR.

Advanced Painting — portrait, draped figure, landscape composition, interiors.

History of Fine Arts. Professor Wilcox.

Æsthetics, weekly lecture. Professor Penny.

Physical Training. Mrs. Clark.

Original Composition in color.

Graduating painting and thesis.

Description of the Courses.

CONTRAPUNTAL HARMONY AND COMPOSITION.

The school offers a course of study covering four years. In the first year the work treats of intervals and scales, formation and progression of chords, modulations, suspensions, etc., with practical

work in harmonizing chants, chorals, and original melodies, analyzing compositions, and ear drill. The subject of harmony is treated contrapuntally from the beginning. Composition is then taken up — the phrase period, two-part song, three-part song, etc., song with trio, with original work in such forms as the minuet, gavotte, romanza, etude, etc., vocal solos, terzettes for female voices, quartets and choruses. In the fourth year follows the application of simple counterpoint (free) in polyphonic forms — the two- and three-voice invention — choral figuration, fugue and canon. In the Senior year the variation and rondo forms are the subject of composition, then the sonatine and sonata, and finally instrumentation for string quartet, wood wind instruments, ordinary full orchestra, modern full orchestra, vocal solo and chorus with orchestra — overture — cantata.

MUSICAL HISTORY, THEORY, AND LECTURES.

The work in musical theory and analysis includes acoustics, instrumentation, and lectures upon musical art, embracing the gradual development of music from ancient to modern times. Lectures are also given upon the important points in vocal culture and a course upon the history of the fine arts, by the Dean.

SEMINARY.

The Seminary is designed especially for students fitting themselves for teachers, although all students of the school are required to attend. The work consists of lectures on the methods of teaching; papers and discussions by students; careful study of the system in use in the school, which aims to combine equally the melodic and harmonic elements of music with the technical, and the examinations of other systems.

DRAWING AND PAINTING.

The basis of all art work is good drawing, and this is insisted upon throughout the course.

The course of study includes systematic and progressive instruction in the theory, history and practice of drawing and painting, decorative design, and in those other branches which bear most intimately and directly upon these arts.

Special advantages are offered to those wishing instruction in illustration. The natural scenery of Lawrence is particularly fine for landscape study. Models for portrait study are abundantly provided, and this work is a strong feature of the course.

Pupils will have access to the classical museum containing a good collection of antique casts.

ELOCUTION AND PHYSICAL TRAINING.

The course embraces a systematic course of body building and training, to correct physical defects and insure physical control. The best ideas of the Swedish, Delsarte, German and American sys-

tems are taught, with gymnasium practice and floor drill. Modern text-books on elocution are discussed, so that the student may become acquainted with all systems. Artificial methods are eradicated, and the best of the true self is developed. Especially valuable to the student of vocal and instrumental music, or of art, has been the work in physical training and elocution.

UNIVERSITY CHORUS.

This chorus is made up of two distinct organizations—the Ladies' Choral Club and the University Glee Club. As the number of voices forming each club is limited, only the best singers are selected. These form a mixed chorus of about 60 voices, which meets weekly for the study of choral music.

The two clubs meet separately for the study of glees, etc., for male voices, and part songs, etc., for female voices. The Glee Club makes an annual concert tour of the state.

ORATORIO SOCIETY.

This society consists of students and Lawrence singers. It meets weekly for the study of oratorios. The "Messiah," "Creation," "Redemption," and other oratorios have been given. One or two oratorios are given annually.

PUPILS' RECITALS AND ART EXHIBITS.

Recitals are given fortnightly by the students of the school in Music Hall, at which works studied in the class room will be performed before a small audience of fellow-students and their friends. Every student is obliged to attend these recitals and all concerts, and take part in the programs at least twice each year.

There will be an exhibit each year of pupils' work in drawing and painting.

CONCERTS.

Free concerts are frequently given in Music Hall and in University Hall by the professors and advanced students of the school, and by outside talent and professionals. Every student taking seminary work is required to attend these concerts.

LIBRARY.

In addition to the general library facilities of the University, students of the school have access to a choice collection of works on the history of music, vocal and orchestral, scores of operas, symphonies, chamber music, oratorios, and cantatas, bound periodicals, pianoforte and organ music, etc. To this collection additions are constantly being made by purchase, donations, and loans. Students are urged to avail themselves as much as possible of the library facilities of the University, as an aid to intelligent and appreciative work in technical lines.

REQUIREMENTS FOR GRADUATION.

Candidates for the degree in music must complete one of the required courses of study.

In the artists' course each graduate must perform in public during the last year of study a concert program, and must present a thesis showing original investigation in some department of musical science or art. In the collegiate course each graduate must present, in addition to the thesis, an original composition, consisting of a sonata for pianoforte, or violin and piano, a quartet for strings, a cantata for solo and chorus, with string and organ accompaniment, or a composition for small orchestra.

In the painting courses, the following is the examination given during the last month of the Senior year: Artistic anatomy; artistic perspective; one charcoal head; one painted head; one painted draped figure; one painted interior; one historical composition; one emblematical composition; a thesis showing original investigation in some department of drawing and painting.

EXPENSES.

The fourth year of the courses in music and painting is free for residents of Kansas. The first three years are to be paid for at the following rates:

The year consists of four half terms of nine weeks each—all bills payable quarterly in advance.

First Year.—Piano or organ: \$22.50 per half term, piano with assistant; or \$27.50, piano with Professor Preyer. Voice or elocution courses, \$33.50 per half term. Violin, \$29.50 per half term.

Second Year, \$30 per half term.

In the vocal course, piano is required in addition, \$12.50 per half term.

In the piano course, voice is optional, at \$11.50 per half term.

These prices include all the theoretical and collegiate studies.

Third Year.—Artists' course: Piano, \$32.50 per half term (without optionals). Collegiate course: Piano, \$27.50 per half term (without optionals). Voice, \$30 per half term (without optionals).

Fourth Year, free to Kansas students.

Drawing and painting, \$12.50 per half term; three lessons a week, each lesson three hours in length.

DEGREES CONFERRED.

Graduates of all the courses in piano, organ, violin and voice will receive the degree of bachelor of music; graduates in painting will receive the degree of bachelor of painting.

SPECIAL CATALOGUE.

A special catalogue of the School of Fine Arts will be sent on application to the Registrar of the University.

The School of Pharmacy.

Faculty.

F. H. SNOW, *President.*

L. E. SAYRE, *Dean,*
Pharmacy and Materia Medica.

E. MILLER,
Mathematics.

W. H. CARRUTH,
German.

E. H. S. BAILEY,
Chemistry and Toxicology.

A. G. CANFIELD,
French.

L. I. BLAKE,
Physics.

C. G. DUNLAP,
English Literature.

S. W. WILLISTON,
Physiology.

E. M. HOPKINS,
English Language.

E. HAWORTH,
Mineralogy.

D. H. HOLMES,
Latin.

H. B. NEWSON,
Mathematics.

W. C. STEVENS,
Botany.

E. C. FRANKLIN,
Chemistry.

H. F. JONES,
Assistant in English.

E. F. ENGEL,
Assistant in German.

EUGÉNIE GALLOO,
Assistant in French.

A. ST. C. DUNSTAN,
Assistant in Physics.

M. E. RICE,
Assistant in Physics and Mathematics.

M. A. BARBER,
Assistant in Botany.

GEORGE WAGNER, *Secretary*,
Assistant in Pharmacy.

EFFIE J. SCOTT,
Assistant in French and German.

R. D. O'LEARY,
Assistant in English.

Course A.—Two Years.

This course embraces two years of two terms each, and the various studies included in it are usually carried during the whole term or half term, and, being progressive, it is with extreme difficulty that a student advances in his work satisfactorily unless he enters at the beginning of the University year, in September. The studies in the pharmacy course are those of a very practical character and, as can be seen, largely relate to the applied sciences. They give the student ample preparation for the responsibility connected with the practice of pharmacy and for special work in the lines of analytical chemistry and the examination of foods and medicines.

REQUIREMENTS FOR ADMISSION.

The candidate must pass an entrance examination in the following studies:

1. Arithmetic, including the Metric System.
2. History of the United States.
3. Geography, Descriptive and Physical.
4. English Grammar and Composition.
5. Constitution of the United States.
6. Physics.

ADMISSION BY CERTIFICATE.

Students will be admitted to this school without examination, upon presentation of the required certificate, as in the School of Arts. For times and places for application for admission and examination, see page 29.

JUNIOR YEAR.

First Term :

Pharmacy (*a*), every day, at 9. Mr. Wagner.
 Pharmacognosy (*b*), every day, at 9. Mr. Wagner.
 Physics (*a*), every day, at 11. Mr. Dunstan.
 Pharmacy Laboratory (*a*), every day, 1 to 3. Mr. Wagner.
 General Chemistry, every day, 3 to 5. Professor Franklin.

Second Term :

Latin, every day, at 8. Miss Oliver.
 Pharmacognosy (*a*), every day, at 9. Mr. Wagner.
 Pharmacy (*b*), every day, at 9. Mr. Wagner.
 Qualitative Analysis (*a*), every day, 2 to 5. Mr. Whitten.
 Pharmacy Laboratory (*b*) every day, 2 to 5. Mr. Wagner.

SENIOR YEAR.

First Term :

Histological Botany (*a*), every day, 8 to 10. Professor Stevens and Mr. Barber.
 Physiological Chemistry (*b*), every day, 8 to 10. Professor Sayre.
 Pharmacy (*a*), every day, at 10. Professor Sayre.
 Microscopical Examination of Drugs (*b*), every day, at 10. Professor Sayre.
 Toxicology (*b*), every day, at 11. Professor Bailey.
 Quantitative Analysis (*a*), every day, 3 to 5. Mr. Whitten.
 Drug Assay (*b*), every day, 3 to 5. Professor Sayre and Mr. Wagner.

Second Term :

Physiology (*b*), every day, at 10. Martin's Briefer Course. Professor Williston.
 Mineralogy (*a*), every day, 9 to 11. Professor Haworth.
 Organic Chemistry, every day, 1 to 3. Professor Franklin.
 Plant Analysis (*a*), every day, 3 to 5. Professor Sayre and Mr. Wagner.
 Thesis.

The instruction in the studies outlined above consists of lectures, recitations, and laboratory practice. The two subjects, materia medica and pharmacy, continue without interruption through the two college years.

In the study of botany, physics, mineralogy, and other subjects which are common to the various departments of the University, the student recites with the collegiate classes.

PRIVILEGES.

This school is an integral part of the University, and students in pharmacy have all the privileges of the University accorded to regular students, such as admission to the library and to the various collections of zoölogy, mineralogy, and botany.

REQUIREMENTS FOR GRADUATION.

The degree of Ph. C. (pharmaceutical chemist) will be given to such students as complete the above course, and pass a satisfactory examination upon the same. Experience in the drug business is no longer required for graduation.

Course B.—Four Years.

Leading to the degree of bachelor of science.

The requirements for admission to this course are the same as those in the School of Engineering.

FIRST YEAR.

First Term:

Chemistry.
Algebra.
English.

Second Term:

Quantitative Analysis.
Scientific German.
English.

SECOND YEAR.

First Term:

Physics.
Quantitative Analysis.
Scientific French.

Second Term:

Advanced Inorganic Chemistry.
Physics.
Materia Medica (a).
Pharmacy (b).

THIRD YEAR.

First Term:

Pharmacy (a).
Materia Medica (b).

Pharmaceutical Chemistry.

Mineralogy (*b*).

Assaying (*a*).

Second Term:

Pharmacy Laboratory.

Organic Chemistry.

Structural Botany.

FOURTH YEAR.

First Term:

Bacteriology (*a*).

Organic Preparations.

Physiological Chemistry (*b*).

Physiology.

Second Term:

Therapeutics (*b*).

Plant Analysis (*a*).

Microscopic Study of Drugs (*a*).

Original Research (*b*).

Thesis.

EXAMINATIONS.

At the end of each course, examinations will be held by the Faculty in such manner as may hereafter be prescribed.

FEEES FOR COURSE A.

In the Junior year, the following fees are to be paid in advance by the student :

A pharmacy laboratory fee of \$20, to cover loss, breakage, gas, and use of material in the laboratory. Any balance unexpended at the end of the year is returned to the student.

General chemistry fee, \$12.

Qualitative analysis, \$6.

Any balance unexpended of chemistry fees at the end of each course is returned to the student.

A physical laboratory fee of \$2.

A botanical laboratory fee of \$1.

In the Senior year, the following fees are to be paid in advance by the student :

A pharmacy laboratory fee of \$20, as in the Junior year.

Pharmaceutical quantitative analysis, \$7.

Organic chemistry, \$10.

Any balance unexpended of chemistry fees at end of each course is returned to the student.

A botanical laboratory fee of \$1, to cover the work in structural botany.

A mineralogical laboratory fee of \$1.50.

The yearly fees for course B will be similar in amounts to the above.

No student will be assigned a desk until the necessary fees are paid.

For details of the work of the department, consult its special catalogue, soon to be issued.

The School of Engineering.

Faculty.

F. H. SNOW, *President.*

F. O. MARVIN, *Dean,*
Civil Engineering.

E. MILLER,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

E. H. S. BAILEY,
Chemistry.

A. G. CANFIELD,
French.

L. I. BLAKE, *Secretary,*
Physics and Electrical Engineering.

E. M. HOPKINS,
English Language.

H. B. NEWSON,
Mathematics.

E. HAWORTH,
Physical Geology.

W. C. STEVENS,
Botany.

E. C. FRANKLIN,
Chemistry.

E. C. MURPHY,
Assistant in Civil Engineering.

F. E. WARD,

Assistant in Electrical Engineering Shops.

H. F. JONES,

Assistant in English.

E. F. ENGEL,

Assistant in German.

EUGÉNIE GALLOO,

Assistant in French.

A. ST. C. DUNSTAN,

Assistant in Physics and Electrical Engineering.

M. E. RICE,

Assistant in Physics and Mathematics.

M. A. BARBER,

Assistant in Botany.

W. K. PALMER,

Assistant in Mechanical Drawing.

Admission.

Every person who applies for admission to the Freshman class in the School of Engineering is required to be examined in the various subjects mentioned below, or to present a certificate from high school, academy, or college, as explained under "Admission by Certificate." An applicant may be admitted, although deficient in some of these requirements, provided such deficiency does not exceed three* terms' work; but all deficiencies must be made good within a period determined upon at the time of admission.

Requirements for Admission.

Physical Geography.

General History.—Myers, Sheldon, Barnes, or Fisher.

Civil Government.—Thorpe and Hodder's Civil Government of the United States and of Kansas, or equivalent.

Algebra.—Through quadratic equations, radicals, and theory of exponents.

Geometry.—Plane and solid.

Physics.—Appleton's School Physics; Gage's Elements of Physics.

*A "term's work" signifies one study pursued daily for a period of half a year.

English.—One year. See p. 22.

French.—One year.* See p. 24.

German.—One year.* See p. 25.

For admission by certificate, see p. 25.

Special Students.—It is designed to give every opportunity for study and research to persons of mature age not enrolled as regular students, who wish and are prepared for special practical work in the lines of engineering offered by this school. Courses will be arranged for such individually, as their experience and training have qualified them.

The admission of such students and the general oversight of their work is under the control of a committee of the Engineering Faculty. All special students are subject to the same regulations as other students, except as to the number of studies taken at one time.

Facilities.

The school is well equipped with apparatus of modern pattern, and from the best makers. The field instruments comprise transits, levels, compasses, solar attachments, rods, chains, tapes, plane tables, heliotropes, current meter, aneroids, and other minor instruments. Among the above are a precise level for very accurate leveling, a secondary triangulation transit for topographical work, and an alt-azimuth instrument for use on primary triangulations, and which has a 10-inch circle, read to single seconds of arc. These three instruments are from Fauth & Co., of Washington, D. C.

A 2,000-pound cement testing machine, with its accompanying appliances, affords an opportunity for the student to compare the different cements found on the market.

The testing laboratory contains an Olsen 100,000-pound testing machine, with the means of making tensile, compressive, transverse, torsional and shearing tests. The machine is accompanied by extensometers and compression micrometers. There are also machine saws and polishing wheels for the preparation of test samples of stone, brick, etc.

Provision is made for an increase in the facilities of the testing laboratory by the addition of torsional and transverse machines, which will be placed in position before the opening of the next college year.

The draughting rooms are provided with convenient tables, are well lighted, and furnished with a large line of photographs and blue prints of actual constructions.

Excellent facilities for practical work in general physics, chemistry, botany and electrical engineering are provided in the very completely equipped laboratories of the University.

*Students having credit for three years of Latin, as outlined on p. 43, or two years of Latin and one year of either French or German, may be excused from either the French or German required in the engineering courses.

The engine-house contains a battery of three low-pressure boilers, used for heating the University buildings, and also three high-pressure boilers, used for power for the shops and various dynamos. This building contains, also, a machine shop, accommodating about 50 students, and adapted to a comprehensive and practical training in machine work.

The engine-room contains a Russell four-valve medium-speed engine of 150 horse-power, fitted with reducing gear and indicator connections, and also a 35 horse-power Armington & Sims high-speed engine, also fitted with indicator connections. Adjoining the engine-house is a forge house, equipped with forges, power blast, and a full assortment of blacksmith tools.

In the machine shop are a dozen large vises, with bench tools, and sufficient forge and carpenter tools, for students' use. There are, among other machines, six screw-cutting engine-lathes, 16-inch swing and 6-foot bed; a Lodge & Davis standard engine-lathe, 18-inch swing and 10-foot bed; a Gray 26-inch by 6-foot iron planer; a Prentice 25-inch swing upright drill; a Brainard universal milling machine, with 39-inch table and 18 inch vertical range; a Lodge & Davis upright drill, and a shaper, 18-inch swing.

In the dynamo room are several complete electric plants, used primarily for experimental and testing purposes, but also providing light and power for the University buildings. These are running every working day, and under charge of a skilled engineer. There is a 500-light Westinghouse alternator; a 750-light Fort Wayne Wood alternator, each with separate exciters; an American arc; a Western 20 K. W. compound-wound multipolar generator; a 4, 5 K. W. General Electric standard 4-pole generator; a three horse-power Eddy bipolar motor. Each plant has its own switch-board and station instruments, and a dozen circuits allow the different currents to be delivered to the various laboratories and lecture rooms in the other University buildings.

Each electrical student in some portion of his course spends one week in both boiler- and engine-room. In connection with the commercial uses of these electric plants, students are at work upon practical problems, such as characteristic curves, efficiency, etc., duty tests of the boilers, use of indicator cards, and power tests. Occasional visits may also be made to neighboring cities for the inspection and testing of plants.

The work of the chemistry department is done in the chemistry building, where there are three laboratories, a lecture room, balance room, store room, etc., and in five rooms in the basement of the main building. There is a good supply of apparatus and material for illustration. The students are given the advantage of the use of chemicals and glassware that are imported duty free. Belonging to this department are assay furnaces for the analysis of ores of gold and silver; combustion furnaces for organic analysis;

a saccharimeter for sugar determinations ; apparatus for the determination of vapor density ; apparatus for gas analysis, for water analysis, for electrolytic analysis, and the usual supplies for advanced analytical work.

The technological portion of the University library contains about 2,000 volumes, while in the reading room are found the leading American and foreign engineering journals.

Courses of Instruction.

The School of Engineering at present offers four courses of instruction, viz.: The course in Civil Engineering, the course in Electrical Engineering, the course in Hydraulic and Sanitary Engineering, and the course in Chemical Engineering. All of these courses lead to the degree of *Bachelor of Science*.

All students of the school pursue the subject of pure mathematics through the calculus, which is followed by thorough courses in analytical mechanics and resistance of materials, including work in the testing laboratory in determining the physical properties of iron, steel, wood, and other structural materials.

In general physics there are given five lectures a week for a year, accompanied by weekly laboratory practice on the part of the students. Enough of French and German is given to furnish an ability to read scientific literature in these languages. The use of English is taught in both the Freshman and Senior years by regular class drill, while exercises in composition are required throughout the course. Full laboratory courses in chemistry are required of all students. Descriptive geometry, including shades and shadows, is taught by class recitations, and accompanied and followed by work in the draughting room on practical problems.

The above are the main subjects pursued in common by all students of this school.

The civil engineers add to their previous study of mechanics the subject of the mechanics of fluid, following the latter with applications to hydraulic engineering, in water-supply, sewerage, hydraulic motors, irrigation, etc. The calculations of strains in structures, and the design and proportioning of the details of roofs and bridges, is carried throughout an entire year. The work in surveying includes land surveying, mining surveys, city surveys, topography, hydrography, elementary geodesy, precise leveling, and the construction of maps and plats, and the use of various instruments on practical work in the field.

All students in civil and hydraulic engineering go into camp for four weeks during the summer vacation. In 1896 the camp was located near Lawrence, and a complete topographic survey of three sections of land was made, affording practice in base measurement, triangulation, leveling, stadia work, and field sketching. The re-

sults of the survey were embodied in contour maps made in camp, and finished plats were worked up later in the fall term.

The classes in railway engineering are made familiar with the field work of preliminary survey, location and construction of railway lines by both class work and surveys in the field. In connection with the use of instruments, considerable attention is given to the causes of errors, their relative values, and the means to be employed to keep the errors within limits. Municipal engineering is given under the heads of water-supply, sanitary engineering, roads and pavements, etc. Under the head of masonry are considered the subjects of foundations, the handling and preparing of stone, cement, concrete, and the construction of piers and arches. Throughout the first three years of the civil engineer's course, two or three afternoons in each week are spent in the draughting rooms on exercises connected with class work, and on drawings designed to give practice in topographic drawing, with both pen and brush, in lettering, in the construction of titles, in the preparation of working drawings, in tracing, and blue printing. Habits of neatness, accuracy and dispatch are insisted upon.

The electrical engineers, in addition to the courses taken in common with other students of the school, as mentioned above, take advanced work in the physical laboratory, courses in thermodynamics, with practice with the steam-engine indicator, the theory of machine construction, together with practical work in the construction of machines. The work of the electrical-engineering student in the draughting room is directed largely to the making of working drawings of machinery. Practice in the machine shop connected with the department of physics, and under the direction of skilled mechanics of the department, forms a part of the instruction. This practice includes vise, bench and forge work, and such general work with the machine lathe, planer, upright drill, milling machine, etc., as will enable the student to work in metals, to make small tools, as taps, dies, reamers, etc. A system of progressive machine work is required of each student throughout his course, and designed to develop manual skill and familiarity with the best general machine-shop practice.

Students who follow the hydraulic course give special attention in the last two years to sanitary engineering, including sewerage, the disposal of sewage and garbage; to water-supply, with reference to the construction of works, the selection and character of the supply and the means of its improvement; to irrigation, including rainfall, evaporation, absorption, run-off and flow of streams, waterways, reservoirs, canals, pumping machinery, the duty of water and methods of application to land; to economic geology, bacteriology, and the chemical analysis of water and soils. They also give some time to practical hydraulic work in the field.

In the course in chemical engineering, in addition to the work

taken in common with the other students of this school, in the Junior year the students begin quantitative analysis, which is to a large extent the foundation of the chemical course, and involves the accurate determination of the composition of various substances, both organic and inorganic. This is followed by the course in the manufacture and purification of chemicals, especially those of an inorganic character, and at the same time work is begun in organic chemistry, which includes both lectures and recitations, and a complete elementary course in the laboratory. It is an essential preparation for the work of the Senior year. In the last year the student devotes more special attention to chemistry. Here he has an opportunity to specialize to a greater extent than in previous years, as several optionals are offered. The practical side of the work is not overlooked, and on this account such subjects as metallurgy, assaying, chemical technology and sanitary and applied chemistry are included.

Degrees.

All courses in the School of Engineering lead to the degree of bachelor of science.

All work for higher degrees is under the supervision of the Faculty of the Graduate School. No second degree will be given earlier than one year after the bachelor's degree has been conferred.

Candidates for the degree of master of science must be graduates in engineering of this University, or of some engineering college of equal rank, and must pursue in residence a course of study for at least one year, equivalent to six full terms' work. From one- to two-thirds of their work must be in engineering and one-third in science other than engineering. A scientific thesis is also required.

Graduates in engineering of this University, and masters of science who have received their degree through the Graduate Faculty, are eligible to the professional degrees of civil engineer, electrical engineer, or analytical chemist, whichever is appropriate to the undergraduate course taken. Candidates for these degrees must have spent at least three years' actual time in professional practice, in positions of responsibility, in the design, construction or operation of engineering works, and must furnish detailed and satisfactory evidence as to the nature and extent of this practice.

They must submit an engineering thesis, accompanied by detailed explanations, drawings, specifications, estimates, etc., and embodying the results of their own work or observation. If approved, the thesis and all accompanying material shall be the property of the University.

All theses for any degree must be delivered to the Dean of the School of Engineering on or before the 15th day of May.

For the courses open to candidates for the degree of master of science, see announcements under the head of "Graduate School."

Course in Civil Engineering.

FRESHMAN YEAR.

First Term:

Scientific French.—Every day, at 11. Miss Galloo.

Algebra.—Every day, at 8, 9, or 10. Professor Miller, Professor Newson, and Mr. Rice.

English (B. I.).—Every day, at 8 or 11. Mr. Jones and assistant.

Free-hand Drawing. Monday, 1 to 3. Mr. Palmer.

Geometrical Drawing and Lettering. Wednesday and Friday, 1 to 3. Mr. Palmer.

Second Term:

Trigonometry (*a*).—Every day, at 8, 9, or 10. Professor Miller, Professor Newson, and Mr. Rice.

Chemistry (*b*).—Every day, at 8 or 10. Professor Bailey.

Scientific German.—Every day, at 8. Mr. Engel.

Descriptive Geometry.—Every day, at 9. Mr. Palmer.

Drawing: Projections and Plates for Descriptive Geometry.—Tuesday and Thursday, 1 to 3. Mr. Palmer.

Four-weeks summer course in field practice.

SOPHOMORE YEAR.

First Term:

Physics.—Every day, at 11. Professor Blake.

Chemistry: Qualitative Analysis.—Every day, 9 to 11. Professor Bailey and Mr. Whitten.

Analytical Geometry.—Every day, at 8. Professor Newson.

Drawing: Shades, Shadows, and Perspective Construction of Titles.—Monday, Wednesday, and Friday, 1 to 3. Mr. Murphy.

Three themes.

Second Term:

Calculus.—Every day, at 8. Professor Newson.

Physics.—Every day, at 11. Professor Blake.

Surveying.—Every day, at 10. Professor Marvin.

Drawing: Topographical.—Tuesday and Thursday, 1 to 3. Mr. Murphy.

Four-weeks summer course in field practice.

Three themes.

JUNIOR YEAR.

First Term:

Elements of Mineralogy and Petrography.—Every day, at 9 to 11. Professor Haworth.

Analytical Mechanics.—Every day, at 11. Mr. Murphy.

Field Engineering.—Every day, at 3. Professor Marvin.

Draughting.—Monday and Wednesday, 1 to 3. Mr. Murphy.

Two forensics, or equivalent theses.

Second Term:

Practical Astronomy.—Every day, at 11. Professor Miller.
 Resistance of Materials.—Four days per week, at 10. Mr. Murphy.
 Location of Railroads.—Three-fifths term (*a*). Every day, at 9.
 Professor Marvin.
 Roads and Pavements.—Two-fifths term (*b*). Every day, at 9.
 Mr. Murphy.
 Testing Laboratory Work: Timber, Iron, and Steel.—One afternoon per week. Mr. Palmer.
 Draughting.—Tuesday and Thursday, 1 to 3. Mr. Murphy.
 Four-weeks summer course in field practice.
 Two forensics, or equivalent theses.

SENIOR YEAR.

First Term:

Mechanics of Fluids (*a*).—Every day, at 10. Mr. Murphy.
 Hydraulic Motors (*b*).—Every day at 10. Mr. Murphy.
 Roofs and Bridges.—Every day, 1 to 3. Professor Marvin.
 Masonry (*b*).—Every day, at 9. Mr. Murphy.
 Sanitary Engineering (*a*).—Every day, at 11. Professor Marvin.
 Testing Laboratory Work: Cements, Stone, and Brick.—One afternoon per week. Mr. Palmer.
 Two forensics, or equivalent theses.

Second Term:

Advanced English Composition.—Monday, Wednesday, and Friday, at 9. Professor Hopkins and Mr. Jones.
 Water-Supply (*a*).—Every day at 11. Mr. Murphy.
 Specifications and Contracts (*b*).—Every day, at 11. Professor Marvin.
 Engineering Design.—Every day, 1 to 3. Professor Marvin.
 Professional thesis.

Course in Electrical Engineering.

FRESHMAN YEAR.

First Term:

Algebra.—Every day, at 8, 9, or 10. Professor Miller, Professor Newson, and Mr. Rice.
 English (B. I.)—Every day, at 8 or 11. Mr. Jones and assistant.
 Scientific French.—Every day, at 11. Miss Galloo.
 Free-hand Drawing.—Monday, 1 to 3. Mr. Palmer.
 Geometrical Drawing and Lettering.—Two afternoons per week, Tuesday, Wednesday, or Friday. Mr. Palmer.
 Shop practice, one-half day per week.

Second Term:

Trigonometry (*a*).—Every day, at 8, 9, or 10. Professor Miller, Professor Newson, and Mr. Rice.
 General Chemistry (*b*).—Every day, at 8 or 10. Professor Bailey.

Descriptive Geometry.—Every day, at 9. Mr. Palmer.
 Scientific German.—Every day, at 8. Mr. Engel.
 Drawing: Projections and Plates for Descriptive Geometry.—
 Tuesday and Thursday, 1 to 3. Mr. Palmer.
 Shop practice, one-half day per week.

SOPHOMORE YEAR.

First Term:

Physics: Mechanics, Sound, and Static Electricity.—Lectures
 four days per week, at 11, and laboratory practice one after-
 noon per week, from 2 to 5. Professor Blake, Mr. Dunstan,
 and Mr. Rice.
 Analytical Geometry.—Every day, at 8. Professor Newson.
 Chemistry.—Every day, 9 to 11. Professor Bailey and Mr.
 Whitten.
 Drawing: Machine Drawing.—Two afternoons per week, Mon-
 day, Tuesday, Wednesday, or Friday, 3 to 5. Mr. Palmer.
 Shop practice, one-half day a week.
 Three themes.

Second Term:

Calculus.—Every day, at 8. Professor Newson.
 Physics: Electricity and Magnetism, Heat and Light.—Lectures
 four days per week, at 11, and laboratory practice one after-
 noon per week, from 2 to 5. Professor Blake, Mr. Dunstan,
 and Mr. Rice.
 Electrical Measurements.—Every day, at 10. Mr. Dunstan.
 Drawing: Machine Designing.—Tuesday and Thursday, 3 to 5.
 Mr. Palmer.
 Shop practice, one-half day a week.
 Three themes.

JUNIOR YEAR.

First Term:

Analytical Mechanics.—Every day, at 11. Mr. Murphy.
 Mathematical Theory of Electricity and Magnetism, with special
 reference to the principles involved in accurate measurements
 of resistances, capacities, and induction coefficients.—Every
 day, at 9. Mr. Rice.
 Differential Equations.—Monday, Wednesday, and Friday, at 10.
 Professor Newson.
 Laboratory Practice, two afternoons per week.—Accurate meas-
 urements of resistances, electro-motive force, determina-
 tion of instrument constants and magnetization curves.
 During the term, each student will be required to design
 and construct some delicate electrical measuring instrument.
 Mr. Rice.
 Two forensics, or equivalent theses.
 Shop practice, one-half day per week.
 Electrical Seminary.—Once a week.

Second Term:

Resistance of Materials.—Four days per week, at 10. Mr. Murphy.

Testing Laboratory Work, one afternoon per week.

Dynamo-electric Machinery: Fundamental Types of Generators and Motors.—Every day, at 9. Professor Blake.

Theory of Alternating Currents.—This course treats of the general equations for current in circuits containing resistance, self-induction and capacity, and the effects of variation of constants. It is intended to develop the mathematical treatment of the subject. Every day, at 11. Mr. Rice.

Laboratory Work, two afternoons per week.—Measurement of electrolytic and insulation resistances, capacities, and inductances. Design and construction of some minor laboratory instruments. Mr. Rice.

Two forensics, or equivalent theses.

Shop practice, one-half day per week.

Electrical Seminary.—Once a week.

SENIOR YEAR.

First Term:

Thermodynamics, including theory of and practice with the steam-engine indicator: steam-engines and boilers, with several practical tests in efficiency and duty. Every day, at 10. Professor Blake.

Alternating Current Machinery.—This course takes up in detail the design and construction of alternators, transformers, and alternating current motors. Special attention is given to the subject of power transmission by polyphasal currents. Every day, at 11. Mr. Dunstan.

Laboratory Work.—Efficiency tests and characteristic curves of direct-current generators and motors. Two afternoons per week. Mr. Dunstan.

Chemistry of the Metals (*a*).—Every day, at 8. Professor Bailey and Professor Franklin.

Chemical Physics (*b*).—Every day, at 8. Professor Franklin.

Machine Practice in construction of several types of dynamos, transformers, and of other commercial electrical appliances. —Two afternoons per week.

One week in fire room and one week in engine-room are required of each student for practice in the proper care and handling of boilers and engines.

Two forensics, or equivalent theses.

Electrical Seminary.—Once a week.

Second Term:

Specifications and Contracts.—2d term (*b*). Every day, at 11. Professor Marvin.

Alternating Current Machinery (continued).—Every day. Mr. Dunstan.

Advanced English Composition.—Monday, Wednesday, and Friday, at 9. Professor Hopkins and Mr. Jones.

Lectures upon the application of electricity to special purposes, together with appropriate laboratory and shop practice. Six hours per week. Professor Blake and Mr. Dunstan.

Electrical Seminary.—Once a week.

Preparation of thesis based upon student's own work.

During the term, special instruction is given at various opportunities in the designing and setting up of machinery, by Mr. Ward, superintendent electrical-engineering shops.

Course in Hydraulic and Sanitary Engineering.

FRESHMAN AND SOPHOMORE YEARS.

Same as the course in civil engineering.

JUNIOR YEAR.

First Term:

Same as the course in civil engineering.

Second Term:

Resistance of Materials.—Four days per week, at 10. Mr. Murphy.

Economic Geology (*a*).—Every day, at 11. Professor Haworth.

Bacteriology (*b*).—Every day. Professor Stevens.

Water and Soil Analysis.—Every day, 3 to 5. Professor Bailey.

Testing Laboratory (timber, iron, and steel).—One afternoon per week. Mr. Palmer.

Draughting.—Tuesday and Thursday, 1 to 3. Mr. Murphy.

Two forensics, or equivalent theses.

Four-weeks summer course in field practice.

SENIOR YEAR.

First Term:

Mechanics of Fluids (*a*).—Every day, at 10. Mr. Murphy.

Hydraulic Motors (*b*).—Every day, at 10. Mr. Murphy.

Sanitary Engineering.—Every day, at 11. Professor Marvin.

Masonry (*b*).—Every day, at 9. Mr. Murphy.

Hydraulic Field Work (*a*). Mr. Murphy.

Testing Laboratory (cement, stone, and brick).—One afternoon per week. Mr. Murphy.

Two forensics, or equivalent theses.

Second Term:

Advanced English Composition.—Monday, Wednesday, and Friday, at 9. Professor Hopkins and Mr. Jones.

Water-Supply (*a*).—Every day, at 11. Mr. Murphy.

Specifications and Contracts (*b*).—Every day, at 11. Professor Marvin.

Irrigation Engineering.—Every day, at 3. Mr. Murphy.

Professional thesis.

Course in Chemical Engineering.

In the Freshman year the course is the same as the civil engineering, except that summer field practice is not required of the chemical engineers.

SOPHOMORE YEAR.

First Term:

Analytical Geometry.—Every day, at 8. Professor Newson.

Physics.—Every day, at 11. Laboratory practice, one afternoon per week. Professor Blake.

Qualitative Analysis.—Every day, from 9 to 11. Professor Bailey and Mr. Whitten.

Three themes.

Second Term:

Botany.—Every day, from 9 to 11. Professor Stevens and Mr. Barber.

Physics.—Every day, at 11. Laboratory practice one afternoon per week. Professor Blake.

Calculus.—Every day, at 8. Professor Miller.

Three themes.

JUNIOR YEAR.

First Term:

Quantitative Analysis.—Every day, from 2 to 5. Professor Bailey.

Mineralogy and Petrography.—Every day, from 9 to 11. Professor Haworth.

Analytical Mechanics.—Every day, at 11. Mr. Murphy.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

Second Term:

Economic Geology (a).—Every day, at 11. Professor Haworth.

Inorganic Preparations (b).—Every day, from 8 to 10. Professor Bailey.

Organic Chemistry.—Monday, Wednesday, and Friday, from 1 to 3, with laboratory practice on Tuesday and Thursday afternoons. Professor Franklin and Mr. Whitten.

Resistance of Materials.—Four days per week, at 10. Mr. Murphy.

Testing Laboratory Work (timber, iron, and steel).—One afternoon per week. Mr. Palmer.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

SENIOR YEAR.

First Term:

Metallurgy (a).—Every day, at 11. Professor Bailey.

Chemical Technology (b).—Every day, at 11. Professor Bailey.

Sanitary and Applied Chemistry.—At the convenience of the instructor and student. Professor Bailey.

Optionals: Either sugar analysis, gas analysis, iron and steel

analysis, or organic preparations. Every afternoon. Professors Bailey and Franklin.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

Second Term:

Advanced English Composition.—Every day, at 9. Professor Hopkins and Mr. Jones.

Analysis of Soils, Fertilizers, Waters, and Foods.—Every afternoon. Professor Bailey,

Assaying (*a*).—Every day, from 10 to 12. Professor Franklin.

Preparation of thesis (*b*).

Chemical Seminary.—Every Thursday, at 4.

The Graduate School.

Faculty.

F. H. SNOW, *President.*

Botany and Entomology.

E. MILLER,

Mathematics and Astronomy.

W. H. CARRUTH,

German.

F. O. MARVIN,

Civil Engineering.

E. H. S. BAILEY,

Chemistry and Metallurgy.

A. M. WILCOX,

Greek.

L. E. SAYRE,

Pharmacy.

A. G. CANFIELD,

French.

L. I. BLAKE,

Physics.

F. W. BLACKMAR,

History and Sociology.

C. G. DUNLAP,

English.

G. B. PENNY,

Voice Training, Contrapuntal Harmony, Musical Composition.

S. W. WILLISTON,
Historical Geology and Paleontology.

OLIN TEMPLIN,
Philosophy.

F. H. HODDER,
American History and Civics.

E. M. HOPKINS,
English.

E. HAWORTH,
Physical Geology and Mineralogy.

D. H. HOLMES,
Latin.

H. B. NEWSON,
Mathematics.

W. C. STEVENS,
Botany.

E. D. ADAMS,
History and Sociology.

A. S. OLIN,
Pedagogy.

E. C. FRANKLIN,
Chemistry.

S. J. HUNTER,
Entomology.

The Graduate School.

The Graduate School provides for all instruction in advanced University studies, under the charge of the Graduate Faculty and its administrative committee, of which the Dean is chairman. It is the business of this Faculty to formulate courses in graduate work, to establish and maintain the requirements for all higher degrees offered by this University; to make recommendations for those degrees to the Board of Regents; and to fix such regulations as they may deem expedient for the government of the School.

Admission to the Graduate School is ordinarily granted to graduates of this University holding the bachelor's degree, and to graduates of other colleges and universities of good standing on presentation of proper evidence of scholarship and testimonials of good character. Applications for admission must be filed on the proper blanks in the office of the Dean of the school, and must be accompanied by an outline of the work proposed to be undertaken as approved by the heads of the departments concerned. Such applications will be received at any time, though it is recommended that work should begin at the beginning of the college year. Upon approval of the application by the administrative committee, a card will be issued to the applicant permitting him to register in the office of the University Registrar.

Graduate students are classified as resident and non-resident, but admission to the Graduate School does not necessarily imply candidacy for a degree.

Resident students, whether candidates for a degree or not, must be in regular attendance on such course or courses as may have been selected and approved, and shall be required to pass all examinations, or to submit to such other regulations and requirements as may be imposed by the heads of the departments concerned. Graduate students who pursue their work in part elsewhere must conform to the requirements imposed in each case by the administrative committee.

The University offers at present six advanced degrees, viz.: Doctor of philosophy, master of arts, master of science, civil engineer, electrical engineer, and analytical chemist. The requirement of time named in each case is the minimum for baccalaureate graduates of this University and of other colleges and universities whose degrees are accepted by this University as equivalent to its own. All admitted with a standing inferior to this must spend such additional period of time to make good the deficiency as may be fixed by the administrative committee.

Degree of Ph. D.

The degree of doctor of philosophy will be granted on the ground of advanced scholarship and the performance of independent work in some special line, under the following conditions:

1. The candidate must be a baccalaureate graduate of this University or of a college or university whose degrees are accepted as equivalent to its own; or he must give satisfactory evidence to the Faculty of the Graduate School that he possesses an equivalent preparation for graduate work.

2. He must make application to the Dean of the Graduate School before the first day of October preceding the commencement at which he intends to present himself for the degree, and must then give satisfactory evidence of his ability to read with fluency such

German and French as may be necessary for the proper prosecution of his studies.

3. He must have spent at least three full college years in resident graduate work at this or some other approved university; the last year must be spent as a resident student of this University. The time spent in attaining the degree of A. M. may be counted toward satisfying this time condition.

4. He must present a thesis showing the results of original research of a high character, and must pass acceptable examinations, both written and oral, in one chief or major study and two allied, subsidiary or minor studies, all of which studies must be in different departments. The oral examination shall be before the Faculty of the Graduate School, where he may be required to defend his thesis. The thesis, embodying the results of original research in some subject connected with his major study, must be presented to the head of the department under whom the work was done not later than the first of May preceding the commencement at which the degree is to be taken, and if approved by him shall be placed on file for inspection in the office of the Dean of the Graduate School for at least two weeks. If finally approved, not less than 100 printed copies must be delivered to the Librarian of the University before graduation, or proper security be given for the printing of that number; provided that, if the thesis has already been printed, 10 copies only shall be deposited with the Librarian.

For the present the departments which offer opportunities for a major course for the degree of Ph. D. are as follows:

Latin.

Economics and Sociology.

Paleontology.

Mineralogy, Stratigraphical and Physical Geology.

Mathematics.

The Master's Degree.

The degree of master of arts or master of science will be granted only after at least one full year's resident graduate work. The candidate must have completed with high credit six full courses or their equivalent chosen from the courses of graduate study; other courses may be offered only by the special consent of the departments concerned and with the approval of the administrative committee; but courses for which a professional certificate or diploma is given will not be counted toward this degree. Work may be confined to a single department and may not be distributed among more than three. The candidate must pass a final oral examination upon the courses which he offers for the degree. Not later than the 15th of May preceding the commencement at which the degree is to be taken, he must present to the head of the department in which his chief study has been a thesis which must embody some scholarly research on some topic connected with that study.

Engineering Degrees.

Graduates in engineering of this University, and masters of science who have received their degree through the Graduate Faculty, are eligible to the professional degrees of civil engineer, electrical engineer, or analytical chemist, whichever is appropriate to the undergraduate course taken. Candidates for these degrees must have spent at least three years' actual time in professional practice, in positions of responsibility, in the design, construction or operation of engineering works, and must furnish detailed and satisfactory evidence as to the nature and extent of this practice.

They must submit an engineering thesis, accompanied by detailed explanations, drawings, specifications, estimates, etc., and embodying the results of their own work or observation. If approved, the thesis and all accompanying material shall be the property of the University.

All theses for any degree must be delivered to the Dean of the School of Engineering on or before the 15th day of May.

For further information address the Registrar.

Courses of Graduate Study.

Courses marked with an asterisk are undergraduate courses, but somewhat more extended work is expected of the graduate students choosing them.

Botany and Entomology.

XI. Structure and Development of Cryptogams.—Bacteria or any group may be made a special study. By appointment, every day throughout the year. Mr. Barber.

XII. Morphology and Physiology of the Plant Cell.—By appointment, every day throughout the year. Professor Stevens. Candidates for this course must be able to read French and German.

X. Morphology and Taxonomy of Insects.—Students desiring to take this course must have completed course VII. A thesis embodying results of investigations required at termination of work. Mr. Hunter.

Historical Geology and Vertebrate Anatomy.

Graduate work in this department is, for the present, restricted to histology and vertebrate paleontology.

* III. Histology.—2d term. Laboratory work and lectures. Every day, 2 to 4. Professor Williston and Mr. McClung.

Work in histology, a Senior optional, is offered only in part of the work for the master's degree.

* II. Systematic Paleontology.—Lectures and laboratory work. Zittel's Handbook. 2d term. Every day, at 4. Professor Williston.

This course may be taken as a major study for the master's degree, but must be supplemented by additional reading and laboratory work, equivalent to one full term's work. It will be required of all candidates for the doctor's degree in preparation for special work. The course is largely based upon the museum collections.

* V. Special Work in Vertebrate Anatomy, fossil and recent.—Throughout the year, by appointment. Professor Williston.

This course is research work in some topic in vertebrate paleontology, with the necessary study of living forms, the nature of which must depend largely upon the special preparation of the student and the facilities of the department. Candidates for either degree may take this work, but the requirements and extent of the work for the doctor's degree will be much greater than for the master's degree. Students before entering upon this work must have satisfactorily pursued studies in the elements of physical and historical geology, zoölogy, vertebrate anatomy, and have taken the general systematic course in paleontology.

* VI. Field Work in Paleontology.—Students who are sufficiently prepared may be invited to accompany the head of the department in field expeditions; or they may pursue, under the general direction of their instructor, in these special fields the kind of field work for which they have proper preparation. Professor Williston.

Physical Geology, Mineralogy, and Petrography.

VI. Advanced Mineralogy.—Lectures and laboratory work. For students who have completed I and II, or their equivalent. 1st term and 2d term (a). By appointment. Professor Haworth.

VII. Advanced Petrography.—Lectures and laboratory work. For students who have completed I, II, and III, or their equivalent. 1st term and 2d term (a). By appointment. Professor Haworth.

VIII. Dynamic Geology.—Daily lectures. This course is adapted for advanced students only, especially those who are preparing themselves for teachers of geology. 1st term (b). By appointment. Professor Haworth.

IX.—Field Work in Geology, Mineralogy, and Petrography.—For advanced students only. At present, work in geology will be confined to Kansas; but work in the other branches may be done elsewhere. Each student will be given a special area or problem to investigate, under the advice and assistance of the head of the department. Such field work, if sufficiently meritorious, will be credited as equal to one study pursued in the University for double the length of time actually spent in the field. Spring term (b) and summer months. Professor Haworth.

Chemistry.

* IX. Organic Preparations.—By appointment, every day throughout the year. Professor Franklin.

XII. History of Chemistry; Chemical Theories.—1st term. Monday, Wednesday, and Friday. Professor Franklin.

XIII. Inorganic Preparations.—By appointment, every day throughout the year. Professor Bailey.

XIV. Introductory Physical Chemistry.—1st term. Monday, Wednesday, and Friday. Professor Bailey.

XV. Research Course in General Chemistry.—By appointment. Professor Bailey.

XVI. Research Course in Organic Chemistry.—By appointment. Professor Franklin.

Civil and Mechanical Engineering.

Courses I to XVIII inclusive are open to candidates for the degree of M. A. Courses XIV to XXIII inclusive are open to candidates for the degree of M. S.

* I. Analytical Mechanics.—Must be preceded by calculus. 1st term. Every day, at 11. Mr. Murphy.

* II. Resistance of Materials.—Must be preceded by course I. 2d term. Four days, at 10, with one afternoon in the testing laboratory. Mr. Murphy and Mr. Palmer.

* III. Mechanics of Fluids.—Must be preceded by course I. 1st term (a). Every day, at 10. Mr. Murphy.

* IV and * V. Roofs and Bridges and Elementary Designing.—10 hours per week throughout the year. 1 to 3. Professor Marvin. Must have been preceded by course II.

* VII. Railway Surveying.—This course must be preceded by a general course in surveying. 1st term. Every day, at 3. Professor Marvin.

* X. Sanitary Engineering.—The removal and disposal of sewage by various methods. Water-carriage and pneumatic systems. Separate and combined systems. The construction of sewers, outfalls, and flushing appliances. The ventilation of sewers. Treatment of sewage. The collection and disposal of garbage and other refuse. Garbage destruction. Utilization of refuse. Street cleaning. 1st term, every day at 11. Professor Marvin.

XIV. Geodesy.—Methods of conducting geodetic surveys. Station signals and their location. Angle measurement. Base work. Determination of latitude, longitude, time, and azimuth. Instrumental constants. Leveling by vertical angles. Precise leveling. Adjustment of observations. Figure of the earth. This course must

be preceded by surveying and calculus. 1st term. Lectures and recitations. Professor Marvin.

XV. Advanced Course in Sanitary Engineering.—The public health. Contagious diseases and methods for destroying them. Bacteriological methods as applied to sanitary work. Influence of sanitary works on public health. Effect of different soils on drainage of cities and towns and the healthfulness of dwellings. House drainage, plumbing, and plumbing fixtures. Ventilation and heating of dwellings and public buildings. Water-supply from a sanitary standpoint. The purification of water. This course must be preceded by course X. 2d term. Lectures, recitations, and reading. Professor Marvin.

XVI. Materials of Engineering Construction.—Their action under different forms of stress. Methods of manufacture. Testing machines and methods. Properties of materials as determined from physical tests. This course must be preceded by course II. 1st term. Lectures and recitations, with laboratory work. Professor Marvin.

XVII. Advanced Course in Structural Design.—Cantilever, swing and suspension bridges. Skeleton frames for buildings. Train-shed roofs. Stand-pipes and elevated tanks. This course must be preceded by course V. 2d term. Lectures, recitations, and detailed designing. Professor Marvin.

XVIII. Advanced Course in Hydraulics.—Flow of water through pipes and orifices and in open channels and rivers. Improvements of harbors and tidal rivers. Navigation passes, dams, locks, jetties, dykes, and dredging. Must be preceded by course III. 2d term. Lectures and recitations. Mr. Murphy.

XIX. Advanced Course in Graphical Statics.—Graphics of trusses, continuous girders, stone and metal arches. Must be preceded by course I. 1st term. Recitations and problems. Mr. Murphy.

XX. Inventional Designing.—Devising of mechanisms to meet given requirements. Simple and effective arrangement of parts. Proportioning of parts and construction of working drawings. This course requires a knowledge of the principles of mechanism and machine drawing and designing. 1st term. Three hours twice a week. Mr. Palmer.

XXI. Mechanical Engineering of Power Plants.—Mechanisms of engines. Classification of engines and a study of types. Engine accessories. Valves and valve gearing. Governors for steam-engines. Engine foundations. Engine details, from the standpoint of the designer. Engine connections. The steam-boiler, its construction, setting, and appliances. Care and management of boilers. Study of fuels and combustion. Inspecting and testing. Efficiency tests of power plants. Location and plans for power plants. This course

requires a knowledge of thermodynamics and machine designing. Every day throughout the year. Mr. Palmer.

XXII. Engineering Designing.—Engine and boiler designing. To be taken only in connection with course XXI. 2d term. 3 hours, twice a week. Mr. Palmer.

XXIII. Locomotive Machinery.—Construction, management, and designing. 2 hours per week, throughout the year. Mr. Palmer.

Physics and Electrical Engineering.

* III. Heat.—Advanced laboratory work 10 hours a week. 1st term. Every day, at 2. Professor Blake and Mr. Dunstan.

* IV. Optics.—Advanced laboratory work 10 hours a week. 2d term. Every day, at 2. Professor Blake and Mr. Dunstan.

* V. Electricity.—Application of Ohm's law. Laboratory work 10 hours a week. 1st term. Every day, at 2. Professor Blake, Mr. Dunstan, and Mr. Rice.

* VI.—Mechanics and Sound.—Laboratory work 10 hours a week. 2d term. Every day, at 2. Professor Blake and Mr. Dunstan.

Mathematics.

All students proposing to do graduate work in mathematics must have previously taken the undergraduate courses I, II, III, and IV.

* V. Modern Geometry.—Scott. 2d term. Every day, at 11. Professor Newson.

* VI. Theory of Equations.—Burnside and Panton. 1st term. Every day, by appointment. Professor Miller.

* VII. Advanced Calculus.—Williamson. 2d term. Every day, at 10. Professor Miller.

* VIII. Differential Equations.—1st term. Every day, at 11. Professor Newson.

Courses V and VI are given in alternate years with courses VII and VIII. V and VI will be given in 1897-'98.

IX. Theory of Elliptic Functions.—1st term. Every day, at 12. Professor Newson.

X. Theory of Curves and Surfaces.—Salmon. 2d term. Every day, at 12. Professor Newson.

XI. Quaternions.—Hardy. 1st term. Every day, by appointment. Professor Miller.

XII. Higher Plane Curves.—Application to curves of the third and fourth order, and of the third and fourth class. 1 P. M. 4 hours per week. 2d term. Professor Miller.

XIII. Theory of Functions of Real Variables.—Simple and multiple, line, surface and space integral; series; and geometrical

applications. 2 P. M. 2 hours per week. Both terms. Professor Newson.

XIV. Theory of Functions of a Complex Variable.—Special reference is made in this course to the ideas of Riemann. 2 P. M. 3 hours per week. Both terms. Professor Miller.

XV. Theory of Numbers.—Ordinary and complex whole numbers, residues of powers, and quadratic forms. 8 A. M. 4 hours per week. 1st term. Professor Miller.

XVI. Theory of Substitutions.—Groups, Abelian equations, and equations of the fifth degree. 3 P. M. 4 hours per week. 2d term. Professor Newson.

The following courses are by appointment:

XVII. Absolute Geometry.—Non-Euclidean. Professor Miller.

XVIII. Spherical Harmonics.—Professor Newson.

XIX. Logic of Mathematics.—Professor Miller.

Philosophy.

* II. Experimental Psychology.—1st term. Every day, at 3. Professor Templin.

* III. Ethics.—1st term. Every day, at 2. Professor Templin.

* IV. History of Philosophy.—2d term. Every day, at 11. Professor Templin.

* V. Advanced Logic.—2d term (a). Every day, at 9. Professor Templin.

* VI. Metaphysics.—2d term (b). Every day, at 9. Professor Templin.

* VII. Æsthetics.—1st term (b). Every day, at 4. Professor Templin.

VIII. Advanced Psychology.—A laboratory course consisting of special work in psychological research conducted by the student under the direction of the instructor. It must be preceded by course II, and may be pursued during either or both terms. By appointment. Professor Templin.

IX. Modern Philosophy.—An advanced course in German or English philosophy adapted to the special need of applicants. It includes a critical study of the chief works of the philosophers, preparation of theses, and conferences with the instructor. It must be preceded by courses III, IV, V, and VI. By appointment. Professor Templin.

Economics and Sociology.

The courses of study leading to the degree of M. A. are essentially an elaboration of the undergraduate courses offered as Junior and Senior optionals. There are two main groups of studies offered in

economics and sociology respectively. In the former group are found extended courses of the undergraduate studies of the second year and the last half of the first year in economics. In the latter are extended courses in the first year's work in sociology. Each student is given a special course of study under one or more of the following titles: he may be required to attend the recitations in the undergraduate classes.

Economics.

I. Money and Banking, including Monetary Problems and the History and Theory of Banking. Professor Blackmar.

II. The Principles of Taxation. Professor Blackmar.

III. Economic History and Theory. Professor Blackmar.

IV. Unsettled Questions in Economics. Professor Blackmar.

Sociology.

V. Sociology, Dynamic and Descriptive, with introductory work in Ancient Society and the History of Civilization. Professor Blackmar.

VI. Questions in Practical Sociology, including Charities and Correction, and Social Problems. Professor Blackmar.

Courses leading to the degree of Ph. D. will be prepared for each applicant along the lines indicated below. These suggested lines imply individual research on the part of the student under the direction of the professor in charge.

A.—Economics.

(a) History and Theory of Political Economy. Professor Blackmar.

(b) Taxation and Public Finance. Professor Blackmar.

(c) Corporations and Monopolies. Professor Blackmar.

(d) Economics of Agriculture, and Land Tenures. Professor Blackmar.

B.—Sociology.

(a) Anthropology. Professor Blackmar.

(b) Principles and Theories of Sociology. Professor Blackmar.

(c) Social Pathology. Professor Blackmar.

(d) Special Studies in American and European Charities. Professor Blackmar.

An economic seminary will be conducted throughout the year for all advanced students.

European History.

Studies are open to those who have taken undergraduate courses in English, French and German history, or who can pass examination in these topics.

* I. Comparative Constitutional Law.—1st term. Every day, at 11. Professor Adams. Includes the optional course for undergraduates entitled "History of Institutions." In addition, graduates will undertake a critical study of existing constitutions and fundamental laws of European nations.

* II. Political History of Modern Europe (1792 to present time).—2d term. Every day, at 11. Professor Adams. Includes optional course for undergraduates of same title. In addition, graduates will select some treaty-making period in the course for special study. Map work and historical geography a specialty.

III. English Constitutional History.—2d term. By appointment. Professor Adams. Study of the principal authorities, with special work and thesis on some selected topic.

IV. Epochs of French History.—1st term. By appointment. Professor Adams. For students who can read French readily. Selection of special epoch as topic and study of French authorities.

American History and Administration.

* V. Presidential Administrations—Washington to Jackson.—1st term, at 3. Must be preceded by undergraduate course III. Professor Hodder.

* VI. Presidential Administrations—Jackson to Lincoln.—2d term, at 3. Continuation of course V. Professor Hodder.

* IX. American Historical Seminary.—For students who have passed courses V and VI. By appointment. Professor Hodder.

Greek.

* IX. Homer's Odyssey.—Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 1st term. Every day, at 10. Professor Wilcox.

* X. Plato: Gorgias, Phædo, and Purvis's Selections.—Critical interpretation of the first; rapid reading of the rest. Lectures and private reading on Plato and Greek philosophical writers. 2d term. Every day, at 10. Professor Wilcox.

Latin.

* V, * VI, * VII, * VIII. Seminary: Advanced work in Latin.—Every day throughout the year, at 3. Professor Holmes.

The methods pursued in the seminary will be somewhat broader than is possible by a system of mere recitation, while on the other hand the activities of the student will not be limited to the simple hearing of lectures. The system of courses employed is rotary, consisting of a cycle of four or five years. Every year some department of Latin literature will be chosen for study, and one or two leading authors in that department will be taken as the standard of compari-

son and made the subject of more special endeavor. Thus, next year the department for study will be the Roman historians. In a similar manner, a year will be devoted to Roman comedy, and still another to Roman epic poetry. To extend the acquaintance of the student with the literature of the department, the work will be supplemented by certain prescribed readings in cognate authors, which he will be expected to read by himself and in which he will be examined. To give him a practical acquaintance with critical methods and apparatus, he will be expected to take his turn before the seminary as interpreter. Tests in prose composition will be set from time to time throughout the whole course of the work.

German.

*VII. German Literature of the Eighteenth Century.—Lectures, with reading of masterpieces out of class, with comment on more difficult works in class. Essays and criticisms by members of the class. Klopstock, Wieland, Lessing, Herder. 1st term. Every day, at 11. Not given in 1897-'98. Open only to students who have had German III, IV. Professor Carruth.

*VIII. German Literature of the Eighteenth Century (continued).—Goethe, Schiller, and the close of the century. 2d term. Every day, at 11. Not given in 1897-'98. Professor Carruth.

*IX. German Historical Novels.—Hauff, Scheffel, etc. Careful reading in class of one work by each author, others rapidly outside. Lectures on the history of the novel and on methods and schools in fiction. Theses on separate authors and on the whole course, by members of the class. 1st term. Every day, at 11. Professor Carruth.

*X. German Historical Novels (continued).—Freytag, Dahn, etc. 2d term. Every day, at 11. Professor Carruth.

*XIII. Gothic.—Phonetics and Introduction to Germanic Philology. 1st term. Every day, at 10. Professor Carruth.

*XIV. Luther.—Reading and grammatical study of the German literature of the Reformation. 2d term. Every day, at 9. Professor Carruth.

French.

*VII. The Romantic School: 1800-1835.—Origins and ideas. Chateaubriand, Lamartine, Victor Hugo, Alfred de Vigny, Alfred de Musset. 1st term. Every day, at 10. Professor Canfield.

*VIII. The Development of the Novel in this Century.—Hugo, George Sand, Balzac. The later realism. 2d term. Every day, at 10. Professor Canfield.

*X. History of French Literature.—Lectures, recitations and private readings. 2d term. Every day, at 11. Miss Galloo.

English.*A.—English Literature.*

* X. Invention and Literary Criticism.—Development and theories of literary forms; practice in composition; lecture, conference, and library course; presentation of thesis required. Advanced course, open only to students who have taken English *B*, VI, and English *A*, I and II, or their equivalent, and to be preceded, if possible, by two additional courses in English *A*. 1st term. Every day, at 11. Professor Hopkins.

B.—Rhetoric and English Language.

* II. Anglo-Saxon.—Bright's Anglo-Saxon Reader. 1st term. Every day, at 9. Professor Dunlap.

* III. Anglo-Saxon.—Bright's Anglo-Saxon Reader and *Béowulf*. 2d term. Every day, at 9. Professor Dunlap.

* IV. Middle English.—Morris's Specimens of Early English, Part I. Middle English grammar, philology, and phonology. Thesis required. 1st term. Every day, at 10. Professor Hopkins. (Must be preceded by Anglo-Saxon and elementary German.)

* V. Middle English.—Morris and Skeat's Specimens of Early English, Part II. Skeat's *Piers Plowman*. The life and literature of the fourteenth century. Thesis required. 2d term. Every day, at 11. Professor Hopkins. (Must be preceded by course IV.)

Pharmacy.

III. Analysis of Plant Constituents (proximate analysis).—Must be preceded by qualitative and quantitative analysis and organic chemistry. 1st term. Every day, by appointment. Professor Sayre.

Pedagogy.

I. Educational Theory.—A critical study of the educational doctrines found in the writings of Plato, Quintilian, Comenius, Locke, Rousseau, Herbart, and Spencer. Reports, discussions, and special studies. 1st term. Every day, at 10. Professor Olin.

II. Problems of Organization, Management and Method in School Systems.—Library work, reports, and discussions. 2d term. Every day, at 10. Professor Olin.

III. (a) Comparative Study of Educational Systems.—Lectures, conferences, and special studies. (b) Philosophy of Education.—Library work and discussions. Work mainly based on Rosenkranz, Bain, Sully, and Compayré. 1st term. Every day, at 4. Professor Olin.

Attendance on the weekly pedagogical conference is required of graduate students in pedagogy. Lectures, special studies, and discussions.

Music.

I. Contrapuntal Harmony.—Chord construction, chord relationship, chord progressions. Monday and Thursday throughout the year, at 11. Professor Penny.

II. Musical Composition.—For those who have had I. Monday and Thursday throughout the year, at 9. Professor Penny.

III. History of the Fine Arts, with special reference to the art of music.—Two hours a week throughout the year. Professor Penny.

University Extension.

The University of Kansas recognizes University Extension work as an appropriate part of its services. The importance and success of University Extension has been proven by repeated experiments in England and America. Such institutions as Johns Hopkins, Yale, the University of Pennsylvania, the University of Indiana, the University of Wisconsin and the Chicago University make University Extension a part of their regular work.

University Extension is simply university teaching carried on outside of the University. Its purpose is to give instruction to those who have been denied the privileges of regular university training, and to enable those who have begun university courses to continue them under the direction of university instructors. In short, University Extension is for the express benefit of those who are unable to attend the University.

The instructors of the University have been in the habit of giving, from time to time, when asked by the public, single lectures in different parts of the state. University Extension groups these single lectures about a special topic, and aims to give organic instruction upon it. It will thus be seen that the work is in accordance with the spirit and practice of the University of Kansas.

The following 36 courses of University Extension lectures are offered by the University of Kansas to communities desiring them. The lectures are prepared with a view to continuous study of a given subject, and for solid instruction rather than entertainment alone. They include readings, conferences, and examinations, and are open to all persons who form themselves into a class. At the close of every course an examination is given to the members of the class who may desire it.

Persons who hold the degree of bachelor of arts from the University of Kansas, or from other institutions of equal rank with it, may receive the degree of master of arts upon the satisfactory completion of nine University Extension courses of 12 lectures each. The extension lecturers shall register the courses of candidates for the second degree with the Committee on Graduate Studies, and report to it the result of all examinations. These courses shall be accompanied by such study, reading and examination as shall be prescribed by the professors in charge.

Persons not holding the bachelor's degree may receive a University Extension diploma upon the satisfactory completion of nine University Extension courses of 12 lectures each.

Work done under instructors from other institutions than the University of Kansas will be accepted upon examination for not more than four of the nine courses necessary for a degree or a diploma. This work will also be accepted as undergraduate work, a full course of University Extension being reckoned as a two-thirds term in the University. Nine 12-lecture courses will be accepted as equivalent to one full year's work at the University.

No credit for University Extension courses will be given to students taking work in the University.

The records of all work done under the direction of the University of Kansas will be kept on file at the University.

Not more than one lecture per week will be given in any one of the following courses.

Literary and scientific clubs and associations and reading circles desiring to avail themselves of University Extension lectures ought to form a local association and organize a class, fixing the tuition at a rate sufficient to cover expenses.

The courses offered are as follows:

Studies in Shakspeare. By C. G. Dunlap, Litt. D.

English Literature of the Nineteenth Century. By C. G. Dunlap, Litt. D.

Political Economy. By F. W. Blackmar, Ph. D.

Money and Monetary Theories. By F. W. Blackmar, Ph. D.

Taxation and Public Finances. By F. W. Blackmar, Ph. D.

The Chemistry of Everyday Life. By E. H. S. Bailey, Ph. D.

Electricity and its Modern Applications. By L. I. Blake, Ph. D.

Heat, Light, and Sound, and their Practical Applications. By L. I. Blake, Ph. D.

German Literature (first classic period). By W. H. Carruth, Ph. D.

German Literature (second classic period). By W. H. Carruth, Ph. D.

German Literature (Faust). By W. H. Carruth, Ph. D.

Astronomy. By E. Miller, Ph. D.

Geology. By E. Haworth, Ph. D.

The Romantic School in France. By A. G. Canfield, A. M.

Development of the Novel in France. By A. G. Canfield, A. M.

Classical Greek Literature for English Readers. By A. M. Wilcox, Ph. D.

Greek Architecture and Sculpture. By A. M. Wilcox, Ph. D.

The Latin Poets. By D. H. Holmes, Ph. D.

How Language Grows. By D. H. Holmes, Ph. D.

History of Music. By G. B. Penny, B. S.

Voice Training and the Art of Singing. By G. B. Penny, B. S.

Medical Chemistry and Sanitary Science. By L. E. Sayre, Ph. M.

Physiological Chemistry. By L. E. Sayre, Ph. M.

Ethics. By Olin Templin, A. M.

Psychology. By Olin Templin, A. M.

American History. By F. H. Hodder, Ph. M.

- Government of the United States. By F. H. Hodder, Ph. M.
Municipal Government. By F. H. Hodder, Ph. M.
International Law. By F. H. Hodder, Ph. M.
Roads, Streets, and Pavements. By E. C. Murphy, C. E.
American Literature. By E. M. Hopkins, Ph. D.
The German Empire. By E. D. Adams, Ph. D.
The French Revolution. By E. D. Adams, Ph. D.
Evolution. By F. H. Snow, Ph. D., LL. D.
History of Education. By A. S. Olin, M. A.
Drawing. By A. H. Clark.

Miscellaneous Information.

STUDIES.

Unless otherwise prescribed, the regular work of any student shall consist of three full studies. More or less than this amount may be taken only by permission of the Faculty.

DEPARTMENT OF PEDAGOGY.

This department of University work offers nine courses in the science and art of teaching. Aside from its general-culture value, the work of the department is intended to better prepare for their chosen profession the large number of students who take up the work of teaching immediately after graduation. Among the studies offered are the so-called professional branches, history of education, philosophy of education, school law, methods, and school management.

Chapter 132 of the Session Laws of 1893 provides that, by examination in the above-named professional subjects, University graduates may secure the state certificate, which, after three years' successful experience in teaching, becomes a life diploma, valid in all public schools of whatever grade in the state of Kansas.

Aside from the worthy recognition which is thus given to University graduates who wish to engage in educational work, there is the practical advantage which comes from intelligent investigation and discussion of educational questions, scientifically treated by the highest authorities. Students desiring to teach are especially recommended to avail themselves of this opportunity to do collegiate work, and at the same time prepare specifically for their future vocation.

By authority of the Board of Regents, a special teacher's diploma is granted to A. B., A. M., and Ph. D. graduates of the University who have taken three terms' work in the department of pedagogy and one teachers' course in some other department.

THE UNIVERSITY GEOLOGICAL SURVEY.

By enactment of the Board of Regents, March 28, 1895, and in accordance with the state law under which the University is now being administered, the University Geological Survey of Kansas was formally organized, with the Chancellor *ex officio* director; Prof. S. W. Williston, paleontologist; Prof. Erasmus Haworth, geologist, and Prof. E. H. S. Bailey, chemist.

It is proposed to conduct a systematic geological survey of the state, including investigations along all lines of research which a liberal interpretation of the law will permit. Advanced students will find this a most helpful means of obtaining practical training in all branches of geology. Already considerable work has been accomplished, the report upon which has been published in volumes I and II of the University Geological Survey.

ENGLISH LITERATURE PRIZE.

Through the generosity of Mr. Arthur B. Barteaux, of New York city, a prize of \$20 in books (four volumes, royal octavo, Green's "Short History of the English People," illustrated by Mrs. John R. Green and Miss Kate Norgate, uncut edges and gilt tops, \$5 a volume), will be awarded to that member of the Junior or Senior class who shall present the best characterization of an English author of the Victorian period in any department of letters—literary, philosophical, or scientific. The essay must be at least 2,000 words in length, must be typewritten, and must be submitted to the department of English not later than May 1, 1897. The judges are to be Chancellor F. H. Snow, Mr. B. W. Woodward, and Col. H. L. Moore.

PHYSICAL TRAINING.

The University is glad to announce that provision has been made to afford all students an opportunity for physical training. Instructors have been secured, a large room, with baths adjoining, is fitted up with the necessary lockers and apparatus, and regular classes in physical training have been established, the woman's class under the charge of a woman instructor. Attendance on these classes is optional with Seniors and Juniors, required of Sophomores and Freshmen; each class meeting three times a week for one term and twice a week for the other. Special attention is paid to the individual needs of each student, and to each are assigned such forms of exercise as seem best suited to promote health and proper physical development. In addition to the indoor work required, facilities for additional training are provided for those who desire it, or who may wish to compete for membership in University athletic teams: and such membership is open to all students who maintain a satisfactory standing in their studies.

DISCIPLINE.

That the generosity of the state may not be abused, and that perfect justice may be done all who are earnestly striving to make the best possible use of the opportunities offered, there is but a single requirement: Unexceptional deportment and strict attention to University duties.

EXAMINATIONS.

Examinations, oral and written, are held as frequently as the judgment of the instructor commends, at least at the close of the work in each subject.

Absence from examination or failure in more than one-third of his work, in any one term, severs a student's connection with the University.

RECORD OF STANDING.

At the close of each term, a summary of the students' work is reported to the Registrar, for entry upon the general record. At the end of each half year, the parent or guardian of each student, or the student, if requesting it, is furnished with a copy of the entries relating to that student.

DEVOTIONAL EXERCISES.

Devotional exercises are held in University Hall every morning. All students are cordially invited to attend these exercises.

DEGREES CONFERRED ON GRADUATION.

Any student, on completing the work assigned for the Freshman, Sophomore, Junior and Senior years in the School of Arts, will receive the degree of bachelor of arts; on completing any of the courses in the School of Engineering, the degree of bachelor of science; graduates from the Law School will receive the degree of bachelor of laws; from the School of Pharmacy, the degree of pharmaceutical chemist (Ph. C.); and those from the School of Music, the degree of bachelor of music (Mus. B.)

For information concerning advanced degrees for post-graduate study, see that portion of this catalogue relating to "The Graduate School," pp. 87-101.

SCHOLARSHIPS.

The University offers the following scholarships, each paying one hundred dollars:

1. The D. H. Robinson Memorial Scholarship of the Alumni Association. This is an undergraduate scholarship supported by the Alumni Association, and is open to Juniors and Seniors of the Schools of Arts and Engineering. Held in 1896-'97 by Richard R. Price, of Hutchinson, Kas.

2. The D. H. Robinson Graduate Latin Scholarship. Held in 1896-'97 by Miss Agnes Thompson, Lawrence, Kas.

3. The Lawrence Citizens' Graduate Latin Scholarship.

NON-ACADEMIC WORK.

Believing that the strength and value of the University is measured by its service to the state at large, and wishing to reach as many of our citizens as possible in a helpful and stimulating way, the University authorities cordially invite all who desire to

pursue special or general courses of reading and investigation to connect themselves with the University, or to correspond with those in charge of such studies. Suggestions as to authorities, arrangements of topics, prices of books, etc., will be gladly given. Those pursuing this special work at the University will have the advantage of daily recitations, lectures, library, laboratories, etc.

All who are seeking special information or self-culture, and the highest line of citizen life and influence, should feel that, by the generosity of the state, advice and information are freely placed at their command. Personal supervision, by correspondence, will be cheerfully given to the work of reading clubs or associations for study; and an occasional visit from some member of the Faculty can be secured, when desired by such associations, on application.

LECTURES OFFERED TO KANSAS COMMUNITIES.

In order that as many people of the state as possible may receive some immediate benefit from the University as an institution established for the dissemination of learning, a large number of lectures are offered to Kansas communities by the Faculty of the University. For these lectures no charges are made beyond the actual expenses of the lecturers, when the lectures are made free to the public; but when admission is charged the lecturer will require a fee of \$5, besides expenses. For experimental lectures, or those illustrated with lantern slides, an additional fee of \$5 may be charged. These lectures are suitable for delivery under the auspices of high schools, educational, literary or religious societies. The list of lectures thus offered for the academic year 1897-'98 comprises 81 different subjects, and includes the names of 23 members of the University Faculty. All correspondence regarding these lectures should be addressed to the Chancellor of the University.

THE KANSAS UNIVERSITY QUARTERLY.

The "Kansas University Quarterly" is maintained by the University as the medium for the publication of the results of original research by members of the University. Papers are published in it only on recommendation of the committee of publication, which committee is composed of six professors and the managing editor. The "Quarterly" is issued regularly, as indicated by its title; No. 1, Vol. I, is dated July 1892. Each number contains 50 or more pages of reading matter, with necessary illustrations, the four numbers of each year constituting a volume. The price of subscription is \$2 a volume, single numbers varying in price with cost of publication. Exchanges with similar publications of other colleges or universities and of learned societies are solicited. All communications regarding the "Quarterly" should be addressed to W. H. Carruth, managing editor, Lawrence.

PAPERS.

The weekly papers heretofore existing have been consolidated into one paper, "The University Weekly." The students of the School of Law publish the "Kansas University Lawyer," a paper devoted to the interests of that school.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

The Young Men's Christian Association is an organization composed of active Christian men of the school, banded together for the purpose of preserving and advancing the spiritual interests of the University. A gospel meeting is held every Sunday afternoon in Music Hall, at 3 o'clock, and a daily prayer meeting every morning, at 8:30 o'clock. Instruction is offered in the Bible by competent instructors, and a series of lectures on various topics relating to the Bible is given by members of the Faculty. A committee from the association meets new students at the trains, and will be glad to assist them in finding rooms and boarding places. There will be sent to any address, on application, a handbook giving valuable information to prospective students. Address the president of the association.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

The Young Women's Christian Association is an association of young women in the University, with aims similar to that of the Y. M. C. A. Regular meetings are held every Wednesday afternoon, at 5 o'clock, and the organization unites with the Y. M. C. A. in the course of lectures mentioned above. Several Bible classes are conducted under the auspices of this association. An effort is also made at the beginning of the year to assist young women just entering the University in securing boarding places, and, when desired, places in homes where board may be obtained for assistance in housework.

WOMAN'S LEAGUE.

The Woman's League is an association organized to welcome the young women to the University, to aid them in securing boarding places, and to render them all other assistance in its power. It includes in its membership the women of the Faculty, the wives of members of the Faculty, and the young women students of the University. One object of this league is to promote a healthful social life among students, who are cordially invited to the homes of its members.

SOCIETIES.

A Literary Society, a Moot Senate, a German Club, a French Conversation Club, a Science Club, a Pharmaceutical Club, a Greek Symposium, a Civil Engineering Society, an Electrical Seminary and the Seminary of History and Political Science are

regularly organized and maintained by the students. A large number of standard periodicals, furnished by these clubs, are placed in the University reading room for the use of all students.

TERMS AND VACATIONS.

The academic year is divided into two terms of equal length, the first beginning on the first Wednesday following the 4th of September; the second ending on the first Wednesday following the 5th of June.

There are two vacations: One, the summer vacation of 13 weeks, following the commencement, in June; the other, of two weeks, at the Christmas holidays. Besides these, Thanksgiving day and the following Friday and Monday, and Arbor day (Thursday), with the following Friday and Monday, are observed as holidays.

TUITION FREE.

Tuition is free to Kansas students in every school of the University, and no contingent or admission fee is required of inhabitants of the state.

The fees for non-residents are as follows:

School of Arts, per annum.....	\$10 00
School of Engineering, per annum.....	10 00
School of Law, per annum.....	25 00
School of Pharmacy, per annum.....	25 00
Preparatory Medical Course, per annum.....	25 00
School of Music, tuition for half term.....	35 00

The fee to cover cost of material used and apparatus broken is required in advance of all students in chemistry, pharmacy, medicine, physics, natural history, and civil engineering.

A graduation fee of \$5 is required in all departments.

EXPENSES.

There are no dormitories owned or managed by the University. Students find accommodations in the boarding-houses and homes of Lawrence.

The average price of board, including rooms, light, and fuel, may be placed at \$3.50 a week. Some persons who furnish plain rooms and good, plain food, receive boarders at \$3 or even \$2.50 a week. Day board in private families and at city restaurants may be obtained for \$2.50 to \$3 a week.

Day board in clubs varies according to the economy practiced, from \$1.75 to \$2.50 a week. On this plan, a company of students appoints a steward or a committee to arrange terms with a competent housekeeper, to buy provisions as needed, to keep a list of rooms for rent in the vicinity, and to collect from the membership the cost for each week.

Furnished rooms, generally occupied by two students, cost from \$4 to \$10 a month.

The following is a fair estimate of yearly expenses:

Board, 40 weeks, at \$2 to \$3.50.....	\$30 00 to \$140 00
Room rent, 40 weeks, 50 cents to \$2.....	20 00 to 80 00
Washing	10 00 to 20 00
Books	15 00 to 30 00
Incidentals	15 00 to 50 00
Totals	\$140 00 to \$320 00

Those who can supply the furniture for rooms, buying and preparing the provisions for the table themselves, can thus board for very little cost in money, not a few students actually going through at an expense of \$75 per annum.

All requests for further information should be addressed to the Registrar, State University, Lawrence, Kas.

Roll of Students.

SCHOOL OF ARTS.

GRADUATE STUDENTS.

Candidates for Degree.

RESIDENT.

Banker, Willis George, <i>History, Sociology,</i>	Lawrence.
Burney, Clarence A., A. B. '95, <i>History, English, and Sociology,</i>	Rantoul.
Carpenter, May, A. B. '95, <i>English,</i>	Lawrence.
Clear, John Daniel, A. B. '95, <i>English,</i>	McPherson.
Edwards, Isaac Franklin, A. B. (Baker), <i>History and Sociology,</i>	Wathena.
Gowell, Ralph Curtis, A. B. '96, <i>Zoology,</i>	Linwood.
Grant, Aaron George, A. B. '96, <i>History,</i>	Osage City.
Griffiths, Walter, A. B. '96, <i>Political Economy, English,</i>	Weber.
Henderson, John H., A. B. '96, <i>English, German,</i>	Iola.
Kimpton, Carl Edward, A. B. '95, <i>Sociology,</i>	Netawaka.
Miller, Samuel J., Ph. B. (McPherson), <i>Biology, Geology,</i>	McPherson.
Price, Ralph Ray, A. B. (Baker), <i>History, Political Economy,</i>	
<i>Pedagogy,</i>	Holling.
Quinlan, Cassie Alma, A. B. '96, <i>Entomology,</i>	Lawrence.
Sellards, Cora Kirby, A. B., B. S. (Washburn), <i>English,</i>	Scranton.
Smith, Edward Birge, A. B., A. M. (West Kentucky), <i>Ameri-</i>	
<i>can History, Political Economy,</i>	Great Bend.
Spencer, May Hotchkiss, A. B. '94, <i>English, Pedagogy,</i>	Wakarusa.
Stewart, Alban, A. B. '96, <i>Geology, Paleontology,</i>	Odessa, Mo.
Thompson, Agnes, A. B. '96, <i>Latin,</i>	Lawrence.
Towne, Louise Isabelle, A. B. '96, <i>Sociology, Pedagogy,</i>	Lawrence.
White, Dora Estella, A. B. '96, <i>English, Pedagogy,</i>	Topeka.

NON RESIDENT.

Allen, Winfield Scott, A. B. '88, <i>American History,</i>	Newton.
Ellis, Leander Dallas, A. B. '96, <i>American History, Philosophy,</i>	Burlington.
Page, Larrance, A. B. '96, <i>Mathematics, Pedagogy,</i>	Augusta.
Rush, Elmer Ellsworth, A. B. '95, <i>Sociology and American</i>	
<i>History,</i>	Kansas City, Mo.
Woodman, Hannah Rea, A. B. (Drake), <i>English,</i>	Wichita.
Wallace, Carl E., A. B. '96, <i>History, English,</i>	Hamlin.

Not Candidates for Degree.

RESIDENT.

Emery, Agnes, A. B. '84,	Lawrence.
Glathart, Albert B., A. B. '96,	Lawrence.
Harvey, Sherman Allen, A. B. '89.	Lawrence.
McClung, Clarence Erwin, A. B. '96,	Columbus.
Neal, Stella Miller, A. B. '94,	Columbus.
O'Leary, Matilda Henrichs, A. B. '95,	Lawrence.
Prentice, Sydney Clarke, A. B. '96,	Lawrence.
Riggs, Elmer S., A. B., A. M. '96,	New Lancaster.
Rohe, Alice, A. B. '96,	Lawrence.
Templin, Mabel Hall, A. B. '96,	Kansas City, Mo.

NON-RESIDENT.

Adams, George I., A. M., Ph. D. (Princeton),	Emporia.
Beede, J. W., B. S. (Washburn),	Topeka.
Crane, Walter Richard, A. A.,	Dover.
Daniels, Frederick Percy, B. S.,	Girard.
Grimsley, G. P., Ph. D. (Johns Hopkins),	Topeka.
Logan, William Newton, A. M.,	Beloit.
Prosser, Charles S., M. S. (Cornell),	Schenectady, N. Y.
Graduates, 43.	

SENIORS.

Alder, Eugene Charles,	Lawrence.
Ayres, Harriet Hall,	Lawrence.
Barber, Emma Maude,	Lawrence.
Barnett, Mary Pauline,	Emporia.
Brown, Lola Bell,	Wakarusa.
Cady, Hamilton Perkins,	Council Grove.
Clarke, Florence Greeley,	Lawrence.
Cooke, May,	Herington.
Crooks, John Wesley,	Morse.
Darling, Alice Grace,	Lawrence.
Davies, Howell Emlyn,	Topeka.
Davis, Edith,	Topeka.
Dudley, Mary Josephine,	Ottawa.
Everett, Robert Edward,	Pleasanton.
Falloon, Arthur Leslie,	Hiawatha.
Faxon, Ada,	Lawrence.
Fay, Charles Lyman,	Bayneville.
Flint, Leon Nelson,	Lawrence.
Frazer, Frances Rebekah,	Lawrence.
Gardner, May,	Lawrence.
Geiger, Minnie,	Holton.
Gray, Leslie Carlton,	Salina.
Greenfield, Sadie E.,	Sabetha.
Griffin, William Earnest,	Kansas City.

Growe, Bessie Eleanor,	Frankfort.
Hall, John Franklin,	Easton.
Heil, Louis Peter,	Vidette.
Hester, Oran Thomas,	Haviland.
Hosier, Jennie,	Atchison.
Howland, Constance Genevieve,	Lawrence.
Ikenberry, Levi Daniel,	Ada, Ohio.
Irwin, Edward Payson,	Lawrence.
Katherman, Carrie Belle,	Lawrence.
Katherman, Charles Augustus,	Lawrence.
Kirby, Laura Ellen,	Tonganoxie.
Kohn, Harry Reuben,	New York City.
Landis, Maude,	Lawrence.
Lewelling, Pauline,	Wichita.
Mann, Andrew Wilson,	Horton.
Menke, Harry William,	Garden City.
Metcalf, Helen Griffin,	Topeka.
Miller, Anna Laura,	Peabody.
Miller, Benjamin Leroy,	Sabetha.
McMurray, Will,	Washington.
Nash, Lou,	Topeka.
Opp, Schuyler,	Wa Keeney.
Osborn, Roy Thornton,	Salina.
Parrott, Percival John,	Clay Centre.
Powell, Charles Samuel,	Minneapolis.
Price, Richard Rees,	Hutchinson.
Reed, Will Thomas,	Topeka.
Reynolds, Jessie Annaberta,	Cawker City.
Riggs, May Fuller,	Lawrence.
Robinson, Roy Martin,	Winfield.
Rohrer, Christian A.,	Dillon.
Rosenquist, Flora Isabel,	Neosho Rapids.
Sharpe, Charles Manford,	El Reno, Okla.
Shire, Anna Matilda,	Leavenworth.
Short, John Christopher,	Salina.
Smith, Harold Weeks,	Kansas City, Mo.
Smith, Ida Greeley,	Leavenworth.
Smith, Joseph Elijah,	Minneapolis.
Stanton, Alta,	Lawrence.
Sterling, Charles Morgan,	Dayton.
Stevens, George Walter,	Iola.
Thomas, Gomer M.,	Emporia.
Tinsley, Nora Maud,	Winfield.
Warren, Elizabeth,	Brookfield, Mo.
Williams, Martha Philippa,	Topeka.
Wood, Frederick Hill,	Kansas City, Mo.

Seniors, 70.

JUNIORS.

Abel, Anna Heloise,	Salina.
Allen, Emily,	Topeka.
Belcher, Charles Norton,	Enterprise.
Cavin, Alberta R.,	Globe.
Chapman, Gertrude May,	Seneca.
Cheadle, John Begg,	Erwin, Okla.
Clark, William Haskell,	Warrensburg, Mo.
Clock, Wilkie C.,	Topeka.
Crawford, Leora Anna,	Neodesha.
Crisman, George R.,	Matfield Green.
Criss, Nellie Vincent,	Lawrence.
Douglass, Walter Woodroe,	Colony.
Elliott, Philip Sheridan,	Mayetta.
Ellis, George Washington,	Atchison.
Field, Rhoda Kidder,	Solomon.
Fiester, Lela Ednyl,	Whiting.
Fosdick, Archibald Morris,	Mankato.
Gephart, Eleanor Marshall,	Valley Falls.
Hall, Justus Otho,	Morse.
Hamill, Claude Emmett,	Wakarusa.
Hammers, Brice Evans,	Clear Water.
Haven, Elmer Franklin,	Belleville.
Henderson, Willis Eddy,	Iola.
Hickey, Ethel Ailene,	Lawrence.
Jackson, Arthur Page,	Centralia.
Johnson, Frank Hilliard,	Quenemo.
Johnson, William Oscar,	Robinson.
Keith, John Erwin,	Ottawa.
Klingberg, Axel Rudolph,	Osage City.
Laughlin, Irving Scott,	Foster Mo.
Loomis, Charles Henry,	Tonganoxie.
Manley, D. H., jr.,	Lawrence.
Mershon, Jennie Rebecca,	Buckner, Mo.
McGregor, Mabelle Christa,	Winfield.
McKinnie, Ralph Girard,	Beloit.
McPherson, John Edward,	Blue Rapids.
Neal, Robert Wilson,	Columbus.
Netherton, Raleigh Lawrence,	Eureka.
Neuenschwander, Elise,	Wa Keeney.
Northrup, Fred Dettmar,	Kansas City.
Pennington, Celia Emily,	Lawrence.
Phillips, Duff G.,	Roland.
Pollard, Evangeline Myrtle,	Nickerson.
Potts, Issie Brander,	Paola.
Radford, Agnes,	Lawrence.

Rench, William Stull,	Dighton.
Ringle, William Edgar,	Cherry Vale.
Rising, George Henry,	Salina.
Sampson, William Beach,	Salina.
Shutt, Charles Edwin,	Peabody.
Sinnott, Mary Evangeline,	Oswego.
Snyder, James Roger,	Augusta.
Souder, Alvah,	Newton.
Spencer, Alice Isabelle,	Pleasanton.
Spiers, Gertrude Hughes,	Lyons.
Stewart, Robert Lowry,	Lyons.
Wagner, Charles A.,	Horton.
Wardner, Albert Edgar, jr.,	<i>Kansas City, Mo.</i>
Watson, Rachel Hammond,	Hutchinson.
Wickersham, Lulu,	McPherson.
Wilder, Webster,	Hiawatha.
Wing, Herbert,	Newton.
Zimmerman, Minnie Ella,	Lawrence.
	Juniors, 63.

SOPHOMORES.

Attwater, Henry Clarkson,	Cedar Vale.
Baillie, Gertrude,	Lawrence.
Baillie, Veda,	Lawrence.
Bear, Conie,	Paola.
Bowen, Bertha,	Centralia.
Bretch, Edward,	Newton.
Case, Frank Elwell,	Marion.
Case, Ida May,	Norton.
Case, Stella McKenzie,	Norton.
Caughey, Margaret Catherine,	Horton.
Cloyes, John M.,	Lancaster.
Collins, John Henry,	Topeka.
Coppedge, Robert William,	Langdon.
Cowley, Laurence Leon,	Columbus.
Cross, Walter Martin,	Wa Keeney.
Curry, Ida Elizabeth,	Winchester.
Dale, Ella Alice,	Belleville.
Diesem, Harry Custer,	Garden City.
Emley, Samuel Charles,	Great Bend.
Field, Florence,	Solomon.
Frank, Tenny,	<i>Kansas City, Mo.</i>
Fuller, Cora Jane,	Eureka.
Hayes, Beatrice Bertha,	Paola.
Hazen, Raymond Crandall,	Lawrence.
Henry, John Jacob,	Lawrence.
Hoch, Willie Ella,	Marion.

Hoyt, Harold Eliphalet,	Cambridge, N. Y.
Hudson, Andrew J.,	Fredonia.
Hyde, Emma,	Geneva.
Jaedicke, Clara Rose,	Lawrence.
Jewett, Leonard Frank,	Olathe.
Johnson, Bessie M.,	Winfield.
Kirkwood, Elizabeth Timanus,	Overbrook.
Lane, Oscar Jasper,	Wakarusa.
Laycock, Marion Francis,	Marysville.
Lee, Agnes,	Kansas City, Mo.
Lofty, John,	Osage City.
Mueller, Robert Gottlieb,	Atchison.
Myers, Minnie Belle,	Lawrence.
McCaughan, Elizabeth,	Olathe.
McClair, Charles,	Carbondale.
McCurdy, Anna Vesta,	Hutchinson.
McDowell, Henry Martin,	Scott City.
McGee, Charles James,	Leavenworth.
Nelson, Wilfred Wyckliffe,	Iola.
Newcomer, Sadie Elizabeth,	Hope.
O'Neil, Earnest Richard,	Wellsville.
Parrott, Alfred Horace,	Clay Centre.
Poff, Grace Estelle,	Lawrence.
Pratt, Frank Prescott,	Phillipsburg.
Riggs, Lucy Young,	Lawrence.
Rose, Clinton Emmet,	Concordia.
Royal, Claude Vivian,	Oatville.
Rumold, Christian Ferdinand,	Dillon.
Seeds, Guy Clifford,	Garden City.
Shepp, Edwin Benjamin,	Wakarusa.
Sherman, Glen,	Seneca.
Shinn, Edwin Frank,	Quenemo.
Simpson, Charles Hoke,	Beloit.
Sluss, Clarence Alfred,	Wichita.
Smith, Richard James,	Kansas City, Mo.
Spiers, Kate,	Lyons.
Stone, Elizabeth,	Kansas City, Mo.
Summerfield, Solon Erb,	Lawrence.
Taylor, Isaac Daniel,	Hartford.
Taylor, LaMonte,	Kansas City, Mo.
Teas, Charles Russell,	Lenexa.
Tindall, Mary Evangeline,	Lawrence.
Vickers, Elizabeth May,	Paola.
Walker, Cora Edith,	Eudora.
Watson, Rosalia Blanche,	Hutchinson.
Whitman, Ruth Haywood,	Wakarusa.
Zimmerman, Cornelia Virginia,	Lawrence.

FRESHMEN.

Adams, Leverett Allen,	Lawrence.
Addison, Mayme,	Salina.
Anderson, Ella Marie,	Morganville.
Ayres, Bessie Perry,	Lawrence.
Babize, Laura Angelica,	Sterling.
Baker, Hulda Jane,	Burrton.
Baker, Sadie Isabel,	Yates Center.
Baker, Viola,	Yates Center.
Banks, Frank Elliott,	Lawrence.
Berns, Arnold,	Hanover.
Berns, Rosa,	Hanover.
Bigley, Alpha Norma,	<i>Knobnoster, Mo.</i>
Blackman, Maulsby Willett,	Lawrence.
Blakely, Ellen Jerusha,	Junction City.
Boone, Victor Orsino,	Baxter Springs.
Brewster, Reginald Raymond,	White Cloud.
Bright, Robert Paul,	Pleasanton.
Bromelsick, Walter Wendell,	Lawrence.
Brown, Barnum,	Carbondale.
Brown, Eva H.,	Lawrence.
Brown, Isabel Florence,	Norton.
Buzzi, Antonio S.,	Arkansas City.
Carroll, Edwin Earl,	<i>Little Rock, Ark.</i>
Cates, Hoite,	Chanute.
Closser, Zella Ethel,	Chetopa.
Cochran, Madge,	Peabody.
Cockins, Will W., jr.,	<i>Los Angeles, Cal.</i>
Cole, Clarence Leroy,	Blue Rapids.
Converse, Blanche Elizabeth,	Pearl.
Cooper, Carl Levin,	Newton.
Copeland, Cecil Edwin,	Russell.
Copley, Edward,	Junction City.
Cory, Alice Alberta,	<i>Drexel, Mo.</i>
Coughenour, John Stauffer,	La Crosse.
Cramer, Vinnie Mae,	Lawrence.
Creager, Tina Violet,	Jamestown.
Criss, Bessie Minerva,	Lawrence.
Cross, Blanche Lucile,	Neodesha.
Crowder, Maude Julia,	<i>Eldon, Iowa.</i>
Cubine, Georgia,	Coffeyville.
Curry, Francis Harold,	Topeka.
Cutter, Charlotte Varum,	Vinland.
Dale, Mabel Jane,	Belleville.
Dewey, Pearl,	Farlinville.
Dillon, Arthur,	Eureka.

Douthart, Lela Ferree,	Pratt.
Dryden, Nellie,	Mulvane.
Duke, Ernest M.,	Lawrence.
Durland, Benjamin Merrill,	Centralia.
Eck, Bessie Irene,	Lawrence.
Ellsworth, Margaret Jane,	Cherry Vale.
Eshbaugh, Herbert Lincoln,	Iola.
Everett, Edna,	Pleasanton.
Ewing, Richard Avery,	Iola.
Felgar, James Huston,	Newton.
Field, Russell Willard,	Solomon.
Fiester, Mabel Lynde,	Whiting.
Finch, Ursel,	Harper.
Fisher, Charles Edward,	Lyons.
Folsom, Channing,	Oskaloosa.
Fones, Porter Harry,	Lyons.
Francis, John, jr.,	Colony.
Frazer, Della Stuart,	Lawrence.
Frisselle, John Earl,	Blue Rapids.
Gallup, Stella Cornelia,	Blue Rapids.
Gemmill, Katharine Addison,	Salina.
Goode, Mary Lane,	Olathe.
Goodnight, Lizzie Evelyn,	Frankfort.
Goudy, Arthur Lincoln,	Lawrence.
Graham, Walter Baber,	Brantford.
Gray, Franklin Abe,	Phillipsburg.
Gregg, George Archibald,	Eureka.
Greider, William Henry,	White Cloud.
Grimes, George D.,	Hiawatha.
Grosh, Lulu,	Haysville.
Grover, Ruth Newhall,	Leavenworth.
Hall, Lola Mildred,	Sedgwick.
Hall, Orville Dwight,	Burlington.
Hamman, Ira Willis,	Burlington.
Hansom, Agnes May,	Newton.
Haven, Grace Marie,	Belleville.
Hay, James Eli,	Burlington.
Heinley, Jacob Oliver,	Lyons.
Henderson, Henrietta Laura,	Iola.
Henrichs, Emma Helene,	Humboldt.
Heren, Cyrus Elvino,	Osborne.
Hess, Harrison Henry,	Wichita.
Hill, Gertrude Winslow,	Wakarusa.
Hogg, James Franklin,	Columbus.
Horner, Adaline,	Lawrence.
Housh, Addison Emmett,	Oskaloosa.

Housh, Frank Thomas,	Oskaloosa.
Howell, Edward Justus,	Lecompton.
Hudson, Elizabeth,	Fredonia.
Huntley, Mary Edna,	<i>Wessington Springs, S. D.</i>
Hupp, Frank Sylvester,	Newton.
Hutchinson, Winslow,	Hutchinson.
Ide, Arthur Wheaton,	<i>Creston, Iowa.</i>
Inge, Mary Frances,	Garden City.
Irwin, Will Herbert,	Lawrence.
Kelly, Walter Lawrence,	Frankfort.
Kennedy, Albert Rutherford,	Grant.
King, John Lewis,	Norton.
Klaumann, Clara Fredericka,	Iola.
Klise, Clarence Eugene,	Minneapolis.
Knight, Lucile Josephine,	Beloit.
Lacey, Ellsworth Taylor,	Dillon.
Landis, May,	Lawrence.
Lapham, Walter Acel,	Chanute.
Lawton, Merta Blanche,	Waterville.
Leonard, Howard Chase,	Girard.
Lindas, Edward Starks,	Pawnee Rock.
Linton, Jessie Anna,	Junction City.
Lodge, Helen Clare,	Pratt.
Luther, Ethel May,	Lawrence.
Maggard, Delano Irvin,	Oxford.
Mains, James Roy,	Oskaloosa.
Martin, Lena,	Eureka.
Maynard, Frances Bessie,	Osawatomie.
Mead, Albert Clyde,	Fort Scott.
Montgomery, Florence Mabel,	Troy.
Montgomery, Henry W.,	Troy.
Montgomery, Maude Mary,	<i>Oregon, Mo.</i>
Moon, Rhobe Clarissa,	Kansas City.
Morison, William Brooke,	Centralia.
Morton, Blanche,	Osawatomie.
Moulton, Fay R.,	Marion.
Mueller, Madaline Minnie,	<i>Council Bluffs, Iowa.</i>
McCleery, John Scott,	Fort Leavenworth.
McCray, Alina Mae,	Lawrence.
McCrary, Virginia,	Lawrence.
McCroskey, Orrell Emely,	Peabody.
McFarland, David Ford,	Wakarusa.
McKenna, Lawrence Walter,	Kingman.
Nimocks, Blanche E.,	Great Bend.
Nimocks, George W.,	Great Bend.
O'Byrne, Kittie Elizabeth,	Sabetha.

O'Connor, Armon Stiles,	Grenola.
Olsen, Louis Bernard,	Tonganoxie.
Parks, William Gordon,	Cherry Vale.
Parrott, Edith May,	Clay Centre.
Paul, Lillian Olive,	Augusta.
Paulen, Mildred,	Fredonia.
Peck, Cora May,	Sabetha.
Pendleton, Ellen,	College Mound, Mo.
Peters, Samuel Henderson,	Mankato.
Pollman, Pauline,	La Cygne.
Post, Frank Anson,	Winfield.
Rath, Robert M.,	Dodge City.
Reid, Jennie Elizabeth,	Winfield.
Reno, Minnie Belle,	Garden City.
Reynolds, Adrian,	Sedan.
Reynolds, Myra Lillian,	Cawker City.
Ridenour, Addie J.,	Lawrence.
Robbins, Charles Leonidas,	Russell.
Robinson, George Albert,	Lawrence.
Rodgers, George Dick,	Topeka.
Rogers, Kate,	Lawrence.
Rothrock, Wilburn Joseph,	Lawrence.
Rudiger, Aimee Marie,	Wakarusa.
Rundle, Albert,	Clay Centre.
Scammon, Angie Marcella,	Cherokee.
Sellards, Clara,	Scranton.
Sellards, Elias Howard,	Scranton.
Sellards, Elizabeth Mattie,	Scranton.
Sellards, Gertrude,	Scranton.
Sellards, Mamie Watson,	Scranton.
Shaley, Millard King,	Abilene.
Shinn, Lue Abbie,	Greenleaf.
Sickels, Caroline Eva,	Independence.
Sierer, Guy Bowen,	Emporia.
Simpson, Ernest Guy,	Beloit.
Simpson, Lacey Moore,	McPherson.
Sinnott, Zoe,	Oswego.
Smith, Matthew Allen,	Cawker City.
Smith, Zillah Merriam,	Kansas City.
Smothers, Kitty,	Lawrence.
Spiers, Edward Bruce,	Lyons.
Stanley, William H.,	Lawrence.
Steele, Harry Edwin,	Maize.
Sutton, William Black,	Russell.
Swett, Frank Wentworth,	Haskell.
Taylor, Nathaniel Earle,	Hartford.

Taylor, Satie,	Alton.
Thacher, Solon Otis,	Topeka.
Thompson, James William,	Waterville.
Trauger, Cliftone Ruby,	Wakarusa.
Turner, Katie Hester,	Lawrence.
Upham, George Newhall,	Coffeyville.
Van Fleet, Elma Mary,	Kingman.
Van Hoesen, Lucy Cornell,	Lawrence.
Vickers, Adah Maude,	Paola.
Wagstaff, May Belle,	Lawrence.
Walker, James Herron,	Lawrence.
Ward, Blanche,	Pratt.
Weber, Lila Lang,	Osawatomie.
Wemple, Flint Lee,	Topeka.
Whitney, Harry Elisha,	Anthony.
Wick, Clement Carlisle,	New Chillicothe.
Williams, Arthur R.,	Lawrence.
Williams, Edward March,	Burlington.
Williamson, Ralph Sanford,	Patterson.
Withington, Wilfred,	Humboldt.
Wolfe, Mabel Harriett,	Frankfort.
Woodward, John Angus,	Salina.
Woods, Delos Powell,	Wichita.
Yale, Jed Rial,	Belleville.
	Freshmen, 207.

SPECIALS.

Addison, Katherine,	Salina.
Alberty, Omer Leroy,	Cherokee.
Anderson, Paul,	Stanton.
Andrews, William Hiddleson,	Beloit.
Beam, Albert,	Esbon.
Bolinger, Harry Albert,	Fort Scott.
Bolles, William Alden,	Dallas, <i>Tex.</i>
Boring, Nellie Catherine,	Osborne.
Carney, Earl Morgan,	Beloit.
Clark, Abbie Irene,	Warrensburg, <i>Mo.</i>
Clark, Arthur Wellington,	Boston, <i>Mass.</i>
Coon, Florence Eugenia,	Blue Rapids.
Crew, Elizabeth,	Haddam.
Crew, Katherine,	Haddam.
Daniels, George Wesley,	Kickapoo.
Davis, Clarence,	Stockton.
Davis, Katherine Forrest,	Stockton.
Dunn, Joseph Foster,	Ellinwood.
Emmett, Eveline,	Lawrence.
Engle, John Howard,	Abilene.

Foster, George Otis,	Centralia.
Foulks, Albert Sidney,	Utica.
Freeland, William Merton,	Paola.
French, A. Markle,	Jamestown.
Frost, Mary Elizabeth,	Topeka.
Gernon, Mary Kathleen,	Russell.
Gildermeister, Etta Maude,	Council Grove.
Gorrill, Will Robert,	Wakarusa.
Gould, C. N.,	Maple Hill.
Gray, Margaret,	Beloit.
Griesa, Mabel,	Wakarusa.
Hansmann, Augustus Robert,	New Murdock.
Hayne, Henry Woodworth,	Lawrence.
Henderson, Asenath Olive,	Merwin, Mo.
Henderson, Laura Alice,	Merwin, Mo.
Henderson, Lois Belle,	Merwin, Mo.
Hester, Mark V.,	Haviland.
Holaday, Guy Victor,	Kansas City, Mo.
Holsinger, George Wilmer,	Rosedale.
Inness, Marion M.,	Lawrence.
James, Louis Monroe,	St. Mary's.
King, George Robert,	Lawrence.
Leedy, Clara Romaine,	Le Roy.
Lynn, Clara Gattrell,	Kansas City, Mo.
Miller, Warren Gus,	Pleasanton.
Myers, Willis Lewis,	El Dorado.
McCollum, Harriett,	Lawrence.
McKay, Frank,	Girard.
McKee, L. D.,	Hutchinson.
McKenna, Peter Henry,	Kingman.
Nelson, Celia Ann,	Lawrence.
Norris, Elodie Preston,	Garden City.
Northrup, Austa Adele,	Lawrence.
Noyes, Abbie Merriman,	Parsons.
O'Brien, Hugh Joseph,	Scranton.
Oman, Clinton Howard,	Garnett.
Phillips, Oliver C.,	Roland.
Porter, Lizzie Ann,	Weaver.
Reed, Olive A.,	Clearfield.
Reid, Hessie M.,	Winfield.
Riddle, Mary,	Lawrence.
Rudiger, Alfred Poehler,	Wakarusa.
Sanford, Walter Henry,	Kansas City, Mo.
Scott, John,	Greenwood, Mo.
Shellabarger, Mary Josephine,	Topeka.
Shoemaker, Wayland Starr,	Centralia.

Smith, Helen Estella,	Great Bend.
Smith, Leora Anna,	Wakarusa.
Smith, Ralph Williamson,	Florence.
Smith, Rose Ella (Mrs.),	Great Bend.
Snow, Martha Boutelle,	Lawrence.
Stafford, Orin F.,	Altoona.
Steele, William Graham,	Lawrence.
Stevens, Ada Pugh (Mrs.),	Lawrence.
Stevens, Anna Ruble (Mrs.),	Emporia.
Stewart, Frank W.,	Lyons.
Strickland, Earl Bliss,	Valley Falls.
Sweezy, Schuyler Colfax,	Olivet.
Thacher, Edith,	Topeka.
Todd, Hugh Hendricks,	Atchison.
Tucker, Elbert Stephen,	Wichita.
Van Fleet, Henry H.,	Kingman.
Wagner, George,	Lawrence.
Wagner, Jane (Mrs.),	Lawrence.
Walling, Lalia Viola,	Lawrence.
Wilson, Carey Josephus,	Ottawa.
Wolcott, Guy Edward,	Tonganoxie.
Wourms, John Henry,	Newton.
	Specials, 88.

PREPARATORY MEDICAL.

Cochran, Ora Douglass,	Beloit.
Craik, Charles Wellington,	Oketo.
Hayden, William Marshall,	Larned.
Howard, Minnie Frances (Mrs.),	Dighton.
Howard, William Forrest,	Dighton.
Jones, Hiram Trueman,	Lawrence.
Kenyon, Ernest Loughry,	Lawrence.
Mendenhall, Fred Leonard,	Lawrence.
McKinnie, Charles Edward,	Beloit.
Nowlin, John Herbert,	Hesper.
O'Keefe, James John,	Dafer.
Strahl, Otho,	White City.
Strode, Lindley Edgar,	Fort Scott.
Williams, June,	Florence.

Preparatory Medical, 14.

School of Engineering.

GRADUATE STUDENTS.

Crew, Charles C., C. E.,	Haddam.
Frederick, Charles W., C. E.,	Lawrence.
Withington, Henry Jay, C. E.,	Humboldt.
	Graduates, 3.

SENIORS.

Anderson, Frederick Elmer, E. E.,	Marquette.
Brooks, Walter Thompson, C. E.,	Kansas City, Mo.
Cox, Herbert Frederick, E. E.,	Junction City.
Fletcher, Charles William, E. E.,	Atchison.
Hancock, William Luther, E. E.,	Emporia.
Kraus, Charles August, E. E.,	Hays City.
O'Neil, W. Roscoe, E. E.,	Wellsville.
Rockwood, Sidney Hunt, E. E.,	Cottonwood Falls.
Unwerth, Hans von, C. E.,	Kansas City, Mo.
Wise, Alfred James, C. E.,	Lawrence.
	Seniors, 10.

JUNIORS.

Campbell, James Edgar, E. E.,	Warrensburg, Mo.
Canavan, Asa Lord, E. E.,	North Lawrence.
Clark, Herbert Anthony, E. E.,	Cottonwood Falls.
Gilmore, Frank Lansing, E. E.,	Eudora.
Haggart, Cecil Neil, C. E.,	Salina.
Hoad, William Christian, C. E.,	Lecompton.
Kasano, Herbert Yeizo, C. E.,	Tokio, Japan.
Jio, Mamoru, E. E.,	Tokio, Japan.
Lee, John Merrill, E. E.,	Kansas City, Mo.
Macomb, John Navarre, jr., C. E.,	Coffeyville.
Walker, William Thomas, E. E.,	Lawrence.
Watson, Malcolm Vau, E. E.,	Hutchinson.
Wilson, Lawrence Clyde, E. E.,	Lawrence.
	Juniors, 13.

SOPHOMORES.

Alexander, James Richard, C. E.,	Kansas City, Mo.
Baldrige, Charles William, C. E.,	Mound City.
Clark, Harry G., C. E.,	Leavenworth.
Davis, Grant Edmond, C. E.,	Holton.
Drysdale, James Murray, E. E.,	Greensburg.
Fiester, Cecil Beaumont, E. E.,	Whiting.
Fletcher, John Herbert, Chem. E.,	Fort Scott.
Griggs, Sidney Wesley, E. E.,	Topeka.

Haynes, Roy Scott, C. E.,	Leavenworth.
Kyser, Willis Melvin, E. E.,	Grenola.
Leppien, Edward, E. E.,	Cherry Vale.
Mathews, Fred Elwood, E. E.,	Nickerson.
Ransom, Willard Glidden, E. E.,	Ottawa.
Sanderson, John Christopher, C. E.,	<i>Rich Hill, Mo.</i>
Schreiner, Clarence Weldon, E. E.,	Abilene.
Trueblood, Erwin Earl, C. E.,	Lawrence.

Sophomores, 16.

FRESHMEN.

Barber, Leslie Charles, E. E.,	Marysville.
Bates, Fred Jonathan, E. E.,	Marysville.
Belden, Edward Luther, C. E.,	<i>Kansas City, Mo.</i>
Carter, Edwin Albert, C. E.,	Lawrence.
Cockins, Will W., jr., E. E.,	<i>Los Angeles, Cal.</i>
Cooper, John Hartson, Chem. E.,	Newton.
Cowdrey, Clarence Eugene, E. E.,	Seneca.
Daniels, Walter Horton, C. E.,	Girard.
Dewey, Ernest Kirk, E. E.,	Farlinville.
Duer, Harry Eldon, E. E.,	Arkansas City.
Farwell, Franklin Maginnis, E. E.,	Lawrence.
Funk, Ambrose Clemmer, E. E.,	<i>Palm, Pa.</i>
Hazen, Rufo Arling, E. E.,	Lawrence.
Holliday, Frank Martimer, E. E.,	Hutchinson.
Hood, George Juessen, E. E.,	Clay Centre.
Keely, Royal Rockwood, E. E.,	Augusta.
Luby, William Arthur, E. E.,	Olathe.
Maxwell, Howard, E. E.,	Morrill.
Norton, Edwin Willett, E. E.,	Newton.
Phenicie, Carroll Rubicam, E. E.,	Fort Scott.
Priestley, James Arthur, E. E.,	Baldwin.
Reece, Charles Alfred, E. E.,	White Cloud.
Selig, Ernest Theodore, E. E.,	Lawrence.
Silver, Lon Vale, E. E.,	Morganville.
Stone, Fred, E. E.,	Florence.
Sutton, Walter Stanborough, E. E.,	Russell.
Wells, William Abijah, C. E.,	Seneca.
Wickstrum, Cecil Matthias, E. E.,	Clay Centre.
Yahn, William Frederick, E. E.,	Lawrence.

Freshmen, 29.

SPECIALS.

Bradley, Frank Russell, E. E.,	Clay Centre.
Cain, Heman, E. E.,	White Cloud.
Cluster, Burt, E. E.,	Jewell City.
Davis, David I., Chem. E.,	Rosedale.
Dennis, Walter, E. E.,	Kansas City.

Dum, Chester Wade, E. E.,	Beloit.
Kreamer, Harvey, E. E.,	Jewell City.
Krehbiel, Fred A., E. E.,	Newton.
Marcy, Frank Earl, E. E.,	Putney, Vt.
Mosse, Arthur St. Leger, E. E.,	Arkansas City.
Sanborn, Fred Roi, E. E.,	Kansas City, Mo.
Sheldon, Harry I., E. E.,	Springfield, Mo.
Shepherd, Coy Jasper, E. E.,	Plattsburg, Mo.
Stewart, Will James, E. E.,	Topeka.
Voigts, Emil Elmer, C. E.,	Rosedale.
Watson, Lester Eugene, E. E.,	Emporia.
	Specials, 16.

School of Pharmacy.

SENIORS.

Brady, Francis Frederick,	Springdale.
Bushby, DeWitt Combs,	Lawrence.
Carlile, Mary Lois,	Leon.
Collison, Robert Clyde,	Trenton, Mo.
Davies, Howell Emlyn,	Topeka.
Gray, Spurgeon Nathaniel,	Lawrence.
Ingham, William Vance,	Lecompton.
Kelley, Herma T.,	Burlington.
Kelly, David Clark,	Gardner.
Lange, William,	Fairbury, Neb.
Mathias, John Thomas,	Rosedale.
Maxwell, William Lathrop,	Paola.
Meyer, August Albert,	Alma.
Meyer, Edward William,	Hutchinson.
McCoy, David Leroy,	Beattie.
McKee, Logan David,	Hutchinson.
Norris, Guy Brunnaugh,	Garden City.
Ozias, Ernest Lawrence,	Centralia.
Palmer, Charles Mahin,	Medicine Lodge.
Pope, Charles Stevens,	Manhattan.
Ringer, William Henry,	Paola.
Smith, Almeda Louise,	Lawrence.
Spencer, Daniel Hooker,	Wakarusa.
Stauffer, Jesse Ebersole,	Lecompton.
Stewart, John Solomon,	Mulvane.
Todd, Herbert Gregory,	Topeka.

Seniors, 26.

JUNIORS.

Allen, Roy Eugene,	Wichita.
Armstrong, Eldon Eugene,	Gardner.
Aubuchon, Eugene Lee,	Grenola.
Bardick, George Homer,	Miltonvale.
Chandler, Lewis Burdick,	Burlingame.
Dillard, James Evart,	Fort Scott.
Dockum, Harry Adelbert,	Wichita.
Emley, Frank U.,	Hoisington.
Ewart, Ella Theresa,	Iola.
Ferrel, Hugh Clark,	Stanley.
Frye, William,	Marysville.
Gabriel, Harley Lawrence,	Erie.
Higgie, John K.,	Girard.
Kirkland, Don Cameron,	Olathe.
Kohl, Herman Bernhard,	Hays City.
Marshall, Albert Henry,	North Topeka.
Means, Ash,	Wichita.
Nixon, Will Elmer,	Girard.
Overlander, Charles Leonard,	Leona.
Smith, George Mike,	Augusta.
Smith, Maurice Russell,	Russell.
Spencer, Herbert,	Lawrence.
Swayze, Jason Clarke,	Topeka.
Temple, Harry P.,	Tyro.
Thornton, Joe Jurdon,	Galena.
Will, Norval Henry,	Manhattan.
	Juniors, 26.

SPECIALS.

Brown, Asa Vachel,	Reserve.
Chidester, Guy Harold,	Topeka.
Green, Olive Hortense,	Whiting.
Johnson, Alva Howard,	Cleveland, Mo.
Rankin, Claude Wesley,	Idana.
Street, Howard Shattuck,	Lawrence.
	Specials, 6.

School of Law.

SENIORS.

Alford, Alfred Cecil,	Lawrence.
Anderson, William Alex,	Emporia.
Ashwill, Eugene,	Ottawa.
Bates, Albert B.,	Chetopa.
Beirly, Greene Wyclif,	Garnett.
Blackshere, Harold Marion,	Elmdale.
Breese, Ralph Braden,	Elmdale.
Burney, Clarence Alexander,	Rantoul.
Caldwell, John William,	Leoti.
Campbell, Robert Bruce,	Fort Scott.
Clarke, Adna Girard,	Lawrence.
Cooper, George Gregg,	Madison.
Cornelius, Alpheus William,	Ottawa.
Crum, Arlon Bertram,	Quenemo.
Edmundson, Warren Hayes,	Oswego.
Ferrel, Lewis G.,	Stanley.
Foster, Nathaniel Thomas,	Gardner.
Freeland, William Merton,	Paola.
Gates, Alvin,	Wakefield.
Gear, Dudley Dale,	Greeley.
Gernon, Nicholas Andrew,	Russell.
Guyer, Ulysses Samuel,	St. John.
Harley, Thomas,	Geneseo.
Henshaw, Barclay William,	Lawrence.
Higgins, William H.,	Atchison.
Hillman, Pines,	Lyons.
Hoover, William Christopher,	Columbus.
Howard, Martin Robert,	Fairmount.
Huffman, Clarence Dwight,	Pittsburg.
Jackson, Arthur Milton,	Leavenworth.
Jacobs, James Franklin,	Lawrence.
Lamb, Henry A.,	Parsons.
Lewis, John Meriman,	Carlwick, Ohio.
Limbocker, Myron Arthur,	Manhattan.
Martindale, George William,	Emporia.
Metcalf, Wilder Stevens,	Lawrence.
Miller, Clyde Winwood,	Osage City.
Miller, Warren Gus,	Minneapolis.
McCain, Eugene Lewis,	Emporia.
O'Keefe, Daniel Joseph,	Dafer.
Parks, Isaac Kane,	Bonita.
Parks, Wade Roscoe,	Bonita.

Paul, Clarence Herbert,	Waterville.
Phillips, Oliver C.,	Roland.
Pope, Horace Greeley,	Manhattan.
Robinet, Edward Kelley,	Garnett.
Schmitz, Oscar,	Alma.
Sherman, Adrian Fisher,	Rossville.
Sherman, Guy,	Seneca.
Slawson, Marion G.,	Girard.
Spellman, Clarence I.,	<i>Kansas City, Mo.</i>
Tate, Sidney Swanwick,	Lakin.
Trinkle, Henry Oscar,	La Cygne.
Wagstaff, Thomas Edward,	Lawrence.
Wells, Robert Wesley,	Coffeyville.
Wilson, Palmer Stanton,	Topeka.
Wourms, John Henry,	Newton.
	Seniors, 57.

JUNIORS.

Baine, William Milton,	Haskell.
Bettis, George Mitchell,	Oswego.
Bolinger, Harry Albert,	Fort Scott.
Brown, Ray Ambrose,	Junction City.
Bulger, James Joseph,	Keelville.
Burdick, Cary Lovell,	Carbondale.
Carney, Earl Morgan,	Beloit.
Charles, Thomas,	Republic.
Cline, Wesley Burton,	La Cygne.
Coleman, William Coffin,	Mound Valley.
Collins, John Milton,	Washington.
Corse, Edgar Burton,	Lawrence.
Corwin, Thomas Montgomery,	Topeka.
Cranmer, George Fenimore,	Dover.
Cranmer, Jennie (Mrs.),	Dover.
Davis, Harry Glenn,	Chetopa.
Dickey, William Clayton,	Leoti.
Dunn, Joseph Foster,	Ellinwood.
Ewart, Anderson A.,	<i>Kansas City, Mo.</i>
Fitzpatrick, William Emmett,	Concordia.
Foulks, Albert Sidney,	Utica.
French, A. Markle,	Jamestown.
Gurley, Herman S.,	Barnard.
Hamill, Bertrand Dewey,	Wakarusa.
Hammers, Fred Ketcham,	Clear Water.
Hamon, Jake Louis,	Sedan.
Hancock, Benjamin Harvey,	Stanley.
Hansmann, Augustus Robert,	New Murdock.
Harris, Fred Milo,	Ottawa.
Hayden, George Patrick,	Wetmore.

Hayden, Richard Francis,	Wetmore.
House, Frank Everett,	Lawrence.
Howard, Fred Erwin,	Hiawatha.
Jackson, Thomas,	Waverly.
Julian, Charles Clifton,	Cherry Vale.
Kelly, Simpson,	Porterville.
Kenyon, James Darlington,	Lawrence.
Kimpton, Carl Edward,	Netawaka.
Kincaid, Ernest Robert,	Mound City.
Layton, Walter Adonis,	Axtell.
Leckner, George Frederick,	Leavenworth.
Majors, Joseph Oliver,	Girard.
Markley, Jacob,	Willow Springs.
Means, James Williamson,	Wakarusa.
Morgan, Edwin Brooks,	Princeton.
McKay, Frank I.,	Girard.
McLaughlin, Harry Waldo,	Arkansas City.
Nichols, George Melville,	Vinland.
Noyes, Alfred Harvey,	Parsons.
Olston, Herman A.,	Axtell.
Pitman, Frank Leslie,	Louisburg.
Potter, George Edgar,	Beulah.
Rafter, Myron DeVere,	Holton.
Reid, Hessie M.,	Winfield.
Richardson, George Erastus,	Waterloo, N. Y.
Robertson, Frank Hamilton,	Lawrence.
Saylor, Burton Emory,	Sabetha.
Scott, William Seaver,	Junction City.
Shaw, Robert Whitman,	Nickerson.
Sheldon, Edwin,	Springfield, Mo.
Simpson, Ernest Guy,	Beloit.
Sloan, Arthur Collins, jr.,	Colorado Springs, Colo.
Speak, Fred,	Kansas City.
Spencer, May Hotchkiss,	Wakarusa.
Stewart, Frank Walker,	Lyons.
Strawn, Samuel Morris,	Valley Falls.
Street, Arthur Leonard Howell,	Neodesha.
Thompson, William Joseph,	Olathe.
Vale, Franklin E.,	Attica.
Van Meter, Maurice Vain,	Wellsville.
Van Meter, Will J.,	Parsons.
Wilcox, Alonzo D.,	Muscotah.
Wilkinson, Elmer Frederick,	Ottawa.
Williams, Arthur Raymond,	Lawrence.
Woodard, Fred B.,	Lawrence.

SPECIALS.

Abbott, Judson A.,	Republic.
Brooks, Leonard,	Burden.
Brooks, John Elmer,	Sedan.
Clarke, Fred Adam,	Lawrence.
Griffin, Samuel,	Medicine Lodge.
Griffiths, Walter,	Weber.
Hazzan, Elijah B.,	Montpelier, Vt.
Holdren, Joseph W.,	Spring Hill.
Kitchell, William W.,	Topeka.
Lloyd, Joseph Lewis,	Galena.
Magaw, Charles Albert,	Topeka.
Sherman, Glen,	Seneca.
Stanley, Claudius Chalmers,	Lawrence.
Stevens, Martin Van Buren,	Oskaloosa.
Swayze, Horace George,	Topeka.
Thompson, James William,	Waterville.
Weilep, Franklin John,	Galena.
Wolfe, W. Clyde,	Wilson.
	Specials, 18.

School of Fine Arts.

GRADUATE STUDENTS.

Drake, Anna Adelia, <i>Voice</i> ,	Newbern, Tenn.
Greissinger, Harriet, <i>Piano</i> ,	Fort Niobrara, Neb.
Lichtenwalter, E. Geneve, <i>Piano</i> ,	Toledo, Iowa.
Smith, Louise T.,	Leavenworth.
Wilson, Mattie L.,	Lecompton.
	Graduates, 5.

SENIORS.

Brown, Mattie L., <i>Piano</i> ,	Piper.
Lapham, Olive Agnes, <i>Piano</i> ,	Chanute.
Marshall, Elvis Collett, <i>Voice</i> ,	El Dorado.
McCheyne, Gertrude Muriel, <i>Piano</i> ,	Kansas City, Mo.
Righter, Julia Louise, <i>Piano</i> ,	Coffeyville.
Skofstad, Lottie Blanche, <i>Piano</i> ,	Lawrence.
Spaulding, Gertrude Mary, <i>Piano</i> ,	Lawrence.
Starr, Daisy Olive, <i>Voice</i> ,	Topeka.
Whitaker, Bertha Gertrude, <i>Piano</i> ,	Buffalo.
Wiedemann, Louise Augusta, <i>Piano</i> ,	Lawrence.
	Seniors, 10.

JUNIORS.

Boyles, Kate, <i>Piano</i> ,	Lawrence.
Fisher, Mabel, <i>Piano</i> ,	Lawrence.
Ireton, Della, <i>Piano</i> ,	Chapman.

Lofgren, Hilda Henrietta, <i>Painting</i> ,	Lawrence.
Miller, Florence Maude, <i>Piano</i> ,	Pratt.
McShea, Maud Isabelle, <i>Piano</i> ,	Chapman.
Pampel, Carrie Electra, <i>Piano</i> ,	Centralia.
Thrasher, Sara Emily, <i>Painting</i> ,	Lawrence.
Weber, Sophie, <i>Piano</i> ,	Lawrence.
Welch, Mary, <i>Painting</i> ,	Burrton.
Winnek, Alberta, <i>Piano</i> ,	Leavenworth.
	Juniors, 11.

SOPHOMORES.

Babcock, Frances, <i>Painting</i> ,	Wakarusa.
Brantner, Lena Leota, <i>Piano</i> ,	Wallula.
Burnett, Belle, <i>Piano</i> ,	Blue Rapids.
Gilbert, Thomas Howard, <i>Voice</i> ,	Haviland.
Merrill, John Jacobs, <i>Piano</i> ,	Greenfield.
Sinnott, Corrinne, <i>Piano</i> ,	Oswego.
	Sophomores, 6.

FRESHMEN.

Baker, Viola, <i>Painting</i> ,	Yates Center.
Boughton, Gertrude Helen, <i>Piano</i> ,	Lawrence.
Bullene, Marguerite, <i>Painting</i> ,	Lawrence.
Faas, Blanche H., <i>Piano</i> ,	Leavenworth.
Flintom, Alice Augusta, <i>Piano</i> ,	Lawrence.
Frederickson, Kate E., <i>Piano</i> ,	Chicago, Ill.
Gilman, Violetta, <i>Piano</i> ,	Independence.
Gowell, Prudie Brown, <i>Painting</i> ,	Linwood.
Hartman, Anna, <i>Piano</i> ,	Carbondale.
Havens, Frances M., <i>Piano</i> ,	Leavenworth.
House, Edith Mildred, <i>Piano</i> ,	Lawrence.
Hudson, Elizabeth, <i>Piano</i> ,	Fredonia.
Jackman, Clarence William, <i>Voice</i> ,	Chapman.
Kelley, Edith Dell, <i>Piano</i> ,	Kansas City, Mo.
Madden, Mollie, <i>Piano</i> ,	Hayes.
Maxwell, Maud Beatrice, <i>Painting</i> ,	Keokuk, Iowa.
McCrary, Daisy, <i>Piano</i> ,	Concordia.
O'Connor, Mary James, <i>Piano</i> ,	St. Mary's.
Proud, Effie Grace, <i>Piano</i> ,	Oregon, Mo.
Rees, Olivia Ellen, <i>Painting</i> ,	Minneapolis.
Sands, Helen Brown, <i>Piano</i> ,	Lawrence.
Sellards, Kate Lawson, <i>Piano</i> ,	Scranton.
Snyder, Maud Lucille, <i>Painting</i> ,	Lawrence.
Thompson, Bertha Beatrice, <i>Piano</i> ,	Kirkwood, Iowa.
Tomlinson, Sallie, <i>Piano</i> ,	Villisca, Iowa.
Tuttle, Mrs. Connie Small, <i>Elocution</i> ,	El Paso, Texas.
Wilson, Loisetete, <i>Piano</i> ,	Neosho Falls.
Winter, Clara Sabin, <i>Piano</i> ,	Yates Center.
	Freshmen, 28.

Summary of Enrollment.

	<i>Men.</i>	<i>Women.</i>	<i>Total.</i>
<i>School of Arts.</i>			
Graduates.....	30	13	43
Senior Class.....	37	33	70
Junior Class.....	40	23	63
Sophomore Class.....	41	32	73
Freshman Class.....	109	98	207
First-Year Medical.....	13	1	14
Special Students.....	51	37	88
Total in School of Arts.....	321	237	558
<i>School of Law.</i>			
Senior Class.....	57		57
Junior Class.....	72	3	75
Special Students.....	18		18
Total in School of Law.....	147	3	150
<i>School of Pharmacy.</i>			
Senior Class.....	23	3	26
Junior Class.....	26		26
Special Students.....	5	1	6
Total in School of Pharmacy.....	54	4	58
<i>School of Engineering.</i>			
Graduates.....	3		3
Senior Class.....	10		10
Junior Class.....	13		13
Sophomore Class.....	16		16
Freshman Class.....	29		29
Special Students.....	16		16
Total in School of Engineering.....	87		87
<i>School of Fine Arts.</i>			
Graduates—Music.....		5	5
Seniors—Music.....	1	9	10
Juniors—Music.....		8	8
Sophomores—Music.....	2	3	5
Freshmen—Music.....	1	21	22
Juniors—Painting.....		3	3
Sophomores—Painting.....		1	1
Freshmen—Painting.....		6	6
Special Students—Piano.....	3	61	64
Special Students—Voice.....	26	23	49
Special Students—Violin.....	5	15	20
Special Students—Oratory.....		2	2
Special Students—Painting.....	1	2	3
Total.....	39	159	198
Names counted twice.....	2	24	26
Total in School of Fine Arts.....	37	135	172
Total enrollment in all schools.....	646	379	1,025
Names counted twice.....	17	4	21
Total registration.....	629	375	1,004

In addition, University Extension courses have been conducted by members of the Faculty at the following cities, with the average attendance of citizen students indicated:

	<i>Lecturer.</i>	<i>Attendance.</i>
Lawrence.....	C. G. Dunlap.....	150
Leavenworth.....	A. G. Canfield.....	40
Kansas City, Mo.....	L. I. Blake.....	350
Total.....		540

Classification of Students by Kansas Counties.

Allen	13	Linn	10
Anderson.....	5	Lyon	14
Atchison	9	Marion	10
Barber	2	Marshall.....	22
Barton	9	McPherson.....	5
Bourbon	9	Miami.....	16
Brown.....	7	Mitchell.....	14
Butler.....	8	Montgomery	14
Chase	5	Morris.....	3
Chautauqua	4	Neosho.....	4
Clay.....	11	Nemaha.....	20
Cloud	6	Ness.....	1
Crawford.....	10	Norton	4
Cherokee	13	Osage	25
Coffey.....	8	Osborne	3
Cowley	14	Ottawa	3
Dickinson.....	8	Pawnee	1
Doniphan	8	Phillips.....	2
Douglas*.....	245	Pottawatomie	3
Elk.....	4	Pratt.....	4
Ellis.....	6	Reno	14
Ellsworth.....	1	Republic.....	7
Finney	7	Rice	11
Ford	1	Riley	4
Franklin	13	Rooks.....	2
Geary	6	Rush	5
Greeley.....	1	Russell.....	7
Greenwood.....	6	Saline	11
Harper.....	3	Scott	1
Harvey.....	16	Sedgwick	16
Jackson.....	11	Shawnee	42
Jefferson.....	10	Stafford.....	1
Jewell.....	6	Sumner.....	4
Johnson.....	22	Wabaunsee	3
Kearny.....	1	Washington.....	10
Kingman.....	5	Wichita.....	2
Kiowa.....	4	Wilson	7
Labette	13	Woodson.....	4
Lane	3	Wyandotte	12
Leavenworth	44		918

*A large number of students whose names appear in this catalogue as residents of Douglas county are so catalogued because they temporarily reside in Lawrence for the purpose of attending the University.

Classification by States.

Arkansas.....	1	New York.....	5
California.....	1	Ohio.....	3
Colorado.....	1	Oklahoma territory.....	2
Illinois.....	2	Pennsylvania	1
Iowa.....	7	South Dakota	1
Japan	2	Texas	3
Kansas.....	918	Tennessee.....	1
Massachusetts.....	1	Vermont.....	2
Missouri.....	51		
Nebraska.....	2		1004

Growth of the University

YEAR.	No. of Faculty.....	POST-GRADUATES.			SCHOOL OF ARTS.			NORMAL SCHOOL.			LAW SCHOOL.			PHARMACY SCHOOL.		
		Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...
1866-67.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1867-68.....	7	.....	.....	.....	0	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
1868-69.....	8	.....	.....	.....	0	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1869-70.....	8	.....	.....	.....	6	11	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
1870-71.....	9	.....	.....	.....	15	30	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
1871-72.....	10	.....	.....	.....	28	28	56	.....	.....	.....	.....	.....	.....	.....	.....	.....
1872-73.....	11	.....	.....	.....	47	26	73	.....	.....	.....	.....	.....	.....	.....	.....	.....
1873-74.....	11	.....	.....	.....	31	27	58	.....	.....	.....	.....	.....	.....	.....	.....	.....
1874-75.....	10	.....	.....	.....	35	30	65	.....	.....	.....	.....	.....	.....	.....	.....	.....
1875-76.....	11	.....	.....	.....	42	30	72	2	33	35	.....	.....	.....	.....	.....	.....
1876-77.....	13	.....	.....	.....	49	31	80	41	79	120	.....	.....	.....	.....	.....	.....
1877-78.....	12	.....	.....	.....	63	47	110	4	8	12	.....	.....	.....	.....	.....	.....
1878-79.....	14	1	2	3	73	46	119	5	11	16	13	0	13	.....	.....	.....
1879-80.....	16	0	2	2	68	46	114	18	42	60	18	0	18	.....	.....	.....
1880-81.....	16	1	0	1	98	58	156	16	22	38	15	0	15	.....	.....	.....
1881-82.....	18	1	2	3	99	49	148	20	33	53	7	0	7	.....	.....	.....
1882-83.....	18	4	2	6	129	79	208	20	22	42	12	0	12	.....	.....	.....
1883-84.....	19	7	3	10	106	59	165	23	41	64	24	0	24	.....	.....	.....
1884-85.....	21	13	8	21	107	42	149	3	7	10	14	0	14	.....	.....	.....
1885-86.....	24	8	6	14	108	49	157	.....	.....	*	29	0	29	23	0	23
1886-87.....	27	4	10	14	142	60	202	.....	.....	.....	32	0	32	38	2	40
1887-88.....	31	8	5	13	119	50	169	.....	.....	.....	33	0	33	40	2	42
1888-89.....	32	9	4	13	87	31	118	.....	.....	.....	51	0	51	39	4	43
1889-90.....	33	10	7	17	140	59	199	.....	.....	.....	56	0	56	28	3	31
1890-91.....	36	13	12	25	194	70	264	.....	.....	.....	44	1	45	30	3	33
1891-92.....	44	19	10	29	191	92	283	.....	.....	.....	77	1	78	37	4	41
1892-93.....	45	11	9	20	190	122	312	.....	.....	.....	84	1	85	48	5	53
1893-94.....	50	23	10	33	207	125	332	.....	.....	.....	78	1	79	48	6	54
1894-95.....	52	15	6	21	259	167	426	.....	.....	.....	98	1	99	58	8	66
1895-96.....	52	28	10	38	289	194	483	.....	.....	.....	119	2	121	60	3	63
1896-97.....	56	30	13	43	291	224	515	.....	.....	.....	147	3	150	54	4	58

* Normal department discontinued by act of the legislature.

of Kansas, 1866-1897.

ART SCHOOL.			MUSIC SCHOOL.			SCHOOL OF FINE ARTS.			ENGI-NEERING SCHOOL.			PREPARATORY SCHOOL.			NAMES REPEATED, TO BE DEDUCTED.			TOTAL IN ALL SCHOOLS, AFTER DEDUCTIONS.		
Male...	Female...	Total...	Male...	Female...	Total...	Male...	Female...	Total...	Male...	Female...	Total...	Male...	Female...	Total...	Male...	Female...	Total...	Male...	Female...	Total...
...	29	26	55	...	...	...	29	26	55
...	50	53	103	...	...	...	50	55	105
...	56	60	116	...	...	...	56	66	122
...	66	69	135	...	...	...	72	80	152
...	88	94	182	...	...	...	103	124	227
...	103	106	209	...	...	...	131	134	265
...	94	105	199	...	...	...	141	131	272
...	67	48	115	...	...	...	98	75	173
...	77	52	129	...	...	...	112	82	194
...	75	78	153	2	21	23	117	120	237
...	100	64	164	0	5	5	190	169	359
...	4	15	19	...	...	...	...	...	...	125	128	253	11	22	33	185	176	361
...	5	15	20	...	...	...	...	...	...	143	114	257	11	14	25	229	174	403
...	3	25	28	...	...	...	...	...	...	144	107	251	9	24	33	242	198	440
...	2	30	32	...	...	...	...	...	...	166	111	277	21	31	52	277	190	467
...	2	21	23	...	...	...	...	...	...	141	96	237	8	20	28	262	181	443
...	0	37	37	...	...	...	...	...	...	208	142	350	24	49	73	339	243	582
...	2	36	38	...	...	...	...	...	...	163	105	268	16	32	48	309	212	521
...	59	92	151	...	...	...	...	...	...	144	117	261	63	72	135	277	194	471
...	4	63	67	...	...	...	...	...	...	90	53	143	4	43	47	258	161	419
0	33	33	16	89	105	...	...	...	...	...	...	99	47	146	18	54	72	316	173	489
3	19	22	6	91	97	...	...	...	...	...	...	110	62	172	11	54	65	306	177	483
1	21	22	8	68	76	...	...	...	...	...	...	146	61	207	8	44	52	332	173	505
0	49	49	5	54	59	...	...	...	...	...	...	90	48	138	6	26	32	332	176	508
9	31	40	13	50	63	...	...	...	...	...	...	27	11	38	8	10	18	316	153	474
3	21	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	12	100	112	88	0	88	...	...	...	0	1	1	424	206	630
...	26	159	185	91	0	91	...	...	...	12	5	17	438	231	729
...	17	153	170	101	0	101	...	...	...	24	21	45	427	264	691
...	32	177	209	100	0	100	...	...	...	17	8	25	530	345	875
...	22	134	156	90	1	91	...	...	...	21	8	29	569	326	895
...	37	135	172	87	0	87	...	...	...	17	4	21	629	375	1004

† At the end of 1890-'91 the Schools of Music and Art were combined.

‡ This year marks the beginning of the discontinuance of preparatory studies.

§ At the end of 1890-'91 the preparatory department was entirely abolished.

|| This year the elementary classes in the Music School were abolished.

Roll of Alumni.

School of Arts.

ALUMNI ASSOCIATION.

A. C. SCOTT, '77,	<i>President.</i>
O. TEMPLIN, '86,	<i>Vice-President.</i>
MRS. MATILDA H. O'LEARY, '95.	<i>Recording Secretary.</i>
ARCHIE HOGG, '94,	<i>Corresponding Secretary.</i>
M. W. STERLING, '83,	<i>Treasurer.</i>
E. HAWORTH, '81,	} <i>Executive Committee.</i>
W. E. HIGGINS, '88,	
F. H. OLNEY, '91,	
HELEN SUTLIFF, '90,	
KATE BLAIR, '93,	

CLASS OF 1873.

Ralph Collins, A. B.	Murray Harris, A. B.
Flora (Richardson) Coleman, A.M.	L. D. L. Tosh, A. M.

CLASS OF 1874.

Ida (Blood) Hasselman, B. S.	Ellis B. Noyes, A. B.
Hannah Oliver, A. M.	

CLASS OF 1875.

Alice G. (Boughton) Blackwelder, A. B.	Frank P. MacLennan, M. S.
	*Frank F. Dinsmoor, A. M.
Martha R. (Campbell) Hallowell, A. B.	W. S. Herrick, B. S.
	Eusebia B. (Mudge) Irish, A. B.
Kate Stephens, A. M.	

CLASS OF 1876.

George F. Gaumer, M. S.	Elmer B. Tucker, A. M.
Mary E. Richardson, B. S.	Henry S. Tremper, A. M.
Willard F. Sergeant, A. B.	James A. Wickersham, A. M.
Charles W. Smith, A. M.	Lizzie Ann (Williams) Smith, A. B.

CLASS OF 1877.

Andrew Atchison, A. B.	John Harper Long, S.D.(Tubingen).
Everard Bierer, jr., B. S.	Clara Luella (Morris) Perkins, A.M.
Gertrude Alice (Bullene) Weaver, A. B.	William Osburn, A. M.
	Angelo Cyrus Scott, A. M.
George Will Hapgood, B. S.	Colin Timmons, A. B.
Carrie M. Watson, A. B.	

CLASS OF 1878.

Annie E. (Mozley) Boddington, B. S.	Kate (Williams) Boettcher, A. B.
DeEtta (Warren) Pillsbury, A. B.	

* Deceased.

CLASS OF 1879.

Jessie A. Austin, A. B.	Lizzie J. (Miller) Richards, A. B.
Joseph W. Brigham, B. S.	Alma (Richardson) Wallace, A. B.
William T. Byrd, A. B.	Samuel M. Smith, A. B.
Charles B. Cramer, B. S.	Chandler W. Stephenson, B. S.
James W. Gleed, A. M.	*Sarah I. (Stevens) Preston, A. B.
Howard H. Jenkins, A. B.	William E. Stevens, A. B.
Eudora A. (Wade) Garrett, M. S.	

CLASS OF 1880.

William H. Carruth, A. M., Ph. D.	Annie O. Gilmore, B. S.
(Harvard).	*James O. Hayes, A. B.
Henry V. Chase, B. S.	*Ariel E. Long, B. S., A. M.
*Cora M. (Cherry) Mettner, A. B.	Alfred E. Parker, B. S.
Sarah R. (Dudgeon) Baskerville,	Franklin Riddle, M. S.
A. B.	Solon T. Williams, A. B.

CLASS OF 1881.

Alice Annie (Collier) Rankin, A. B.	Bion Shepard Hutchins, B. S.
Maggie Raymond Eidemiller, A. B.	Mina E. (Marvin) Wilcox, A. M.
Florence E. (Finch) Kelley, A. M.	Alice H. (Peabody) Sears, A. B.
Karl August Floden, A. B.	Don John Rankin, B. S.
Flora M. (Hadley) Little, A. B.	Charles Frederick Scott, M. S.
Erasmus Haworth, M. S., Ph. D.	Edward Gleason Smith, B. S.
(Johns Hopkins).	Pliny Leland Soper, A. M.
Stuart Oliver Henry, A. B.	*Nellie Green(Thacher)Henry, A.B.
George Scott Hopkins, A. M.	Julia M. (Watson) Nicholson, A. B.
*Herbert John Humphrey, A. B.	Charles Green Upton, B. S.
Mary Webb (Woodward) Doran, A. B., B. D.	

CLASS OF 1882.

Ethel Beecher Allen, A. M.	Charles Jefferson Simmons, A. B.
Festus Foster, A. B.	Lindley Murray Spray, A. B.
Richard Foster, M. S	Mary Elizabeth Wilder, A. B., B. D.
Abner Walter Hill, B. S.	Ellen A. (Woodcock) Upton, A. B.
Edward Clement Meservey, A. B.	Philip Connor Young, B. S.

CLASS OF 1883.

Alla May (Barnes) Foster, B. S.	Mary Catherine McQuiston, A. B.
Helen W. (Bay) Raymond, A. B.	Ann Eliza Murphy, B. S.
Samuel Wheeler Brewster, A. B.	*Robert Murdaugh Osmond, A. B.
Ada Eleanor Briggs, A. M.	Percy Blackstone Russell, A. B.
Edward Arnold Brown, A. M.	James Gabriel Smith, A. B.
Edmund Butler, B. S.	William Cornelius Spangler, B. S.,
*Charles Curtis Dart, M. S.	LL. B.
Cara E. (Fellows) Sterling, A. B.	Miles Wilson Sterling, A. M.
Frank Day Hutchings, A. B.	John Foster Tucker, A. B.
Edward Campbell Little, A. M.,	Oliver David Walker, B. S., M. D.
LL. B.	William Solomon Whirlow, B. S.

CLASS OF 1884.

*Walter Hamlin Britton, A. B.	Glen Lewis Miller, A. B.
*Delia Kate Churchill, A. B., B. D.	Mary Elwood (Miller) Barnes, A.B.
*Mary Agnes Clarke, A. B.	William Henry Nevison, A. B.,
*Charles Dickey Dean, B. S.	M. D. (Cincinnati).
Lewis Lindsay Dyche, A. M., M. S.	Cora E. (Pierson) Hopkins, B. S.
Agnes Emery, A. B.	Frank Prentiss, B. S.

William Townsend Findley, A. B.	Lida Romig, A. B.
Clara Sciota Gillham, A. B.	Kate L. (Ridenour) Lester, A. B.
Mary Green Gilmore, A. B., B. D.	Albert Stanley Riffle, B. S.
Mary (Griffith) Osmond, A. B.	Fred. Asa Stocks, M. S.
Merton Joy Keys, B. S.	Addie Mila (Sutliff) Wheeler, A. B.
Lucius Henry Leach, A. B.	George Brown Watson, A.B., LL.B.
Alice Lewette Litchfield, A. B.,	Clarence Ernest Wood, A. B.
B. D.	

CLASS OF 1885.

Ida Charlotte Barnes, A. B.	Harriet Clark Hulick, B. S.
Blanche Ketene Bruce, A. B.	James Vance Humphrey, B. S.
Eldie Franklin Caldwell, A. B.,	William Hamilton Johnson, A. M.
LL. B.	Victor Linley, A. B.
Samuel Marion Cook, A. B.	William Yoast Morgan, A. B.
Albert Eugene Curdy, A. B.	Lewis Morgan Powell, A. B., M. D.
Frank Sharon Foster, B. S.	John Paul Rote, A. B.
Stephen Ernest Himoe, B. S.	Henry Fremont Smith, B. S.
Nettie A. (Hubbard) Boles, B. S.	William Chase Stevens, M. S.
Harriet Tracy Williams, A. M.	

CLASS OF 1886.

Arthur L. Adams, B. S.	Claribel Greenameyer, A. B.
Richard Birbeck, B. S.	*William Lane, B. S.
Samuel Burkholder, A. B.	Laura Edith Lyons, A. B.
Joseph Ellsworth Curry, A. B.	John Dice McLaren, M. S., B. D.
*Harriet R. (Dunn) Smith, B. S.	Frank Thompson Oakley, B. S.
Sarah Maria Emery, A. B.	Louella (Palmer) Graham, A. B.
Harriet Bliss (Haskell) MacDon-	Harry Earle Riggs, A. B.
ald, A. M.	Evelyn (Smith) Miller, A. B.
Rebecca E. (Jacke) Townsend, A. B.	*Mary G. Stimpson, A. B., B. D.
Julia Georgianna Flinn, A. B.	Olin Templin, M. S., A. M.
Solon Thacher Gilmore, A. B.	Lena Angie (Van Voorhis) Templin,
Harlin F. Graham, A. M., B. D.	A. M., B. D.

CLASS OF 1887.

Georgia L. (Bell) Mellon, A. B.	Joseph Barlow Lippincott, B. S.
Edward Giles Blair, A. B., M. D.	Albert Calvin Markley, A. B., B. D.
Cyrus Sykes Crane, A. B.	Robert Lynn McAlpine, B. C. E.
Jeptha Dickey Davis, A. B.	Luella Jane Moore, A. B.
Denton Dunn, A. B.	*Henri Nickel, A. M., B. D.
William Suddards Franklin, M. S.,	Mary Antoinette Rice, A. B., A. M.,
S. D. (Cornell).	Ph. G.
Grant W. Harrington, A. B., B. D.	Ella Elson Ropes, A. B.
Claude Britton Highbargin, B. S.	Samuel W. Shattuck, jr., B. S.
Hans Clarence Himoe, A. B.	Charles Lincoln Smith, B. S.
Wilbur Simpson Jenks, A. B., B. D.	Harry Denman Smith, A. B.
Cora (Kimball) Melvin, A. B., B. D.	Olive Thompson, B. S.
Agnes (Wright) Strickland, B. S.	

CLASS OF 1888.

Winfield Scott Allen, A. B., B. D.	Edward Curtis Franklin, M. S.,
Fred Holmes Bowersock, B. C. E.	Ph. D. (Johns Hopkins).
William Harvey Brown, B. S.	Paul Goddard, B. C. E.
Annis Francena Chaffee, A. B., B. D.	John Morris Halligan, B. S.
Adelia May (Churchill) Sloan,	William Edward Higgins, B. S.
A. B., B. D.	Owen Cyrus Le Seur, B. C. E.

William Riley Cone, A. B., B. D.	John Adams Prescott, A. M.
Frank Grant Crowell, A. B., LL. B. (Columbia).	William Turner Reed, A. B.
Austin Curtis Cunkle, A. B.	Joseph Rolston, A. B.
Thomas Francis Doran, A. B.	Frank John Savage, B. C. E.
Josephine Gilmore, A. B., B. D.	Clarence E. Springer, B. C. E.
	Clara A. (Wilson) Allbright, A. B.

CLASS OF 1889.

Harry Buckingham, B. S.	Asa Dutton Kennedy, B. S.
William Talbot Caywood, A. B.	Mary A. (Manley) Parmalee, A. B.
Gertrude Anna (Crotty) Davenport, B. S.	Anna Louise McKinnon, M. S., Ph. D. (Cornell).
*George Lowman Dick, A. B.	Catharine Merrill, A. B.
Susan F. (Eddy) Johnson, A. B.	Flora A. (Newlin) Henshaw, A. B.
Sherman Allen Harvey, A. B.	Sidney Phillips, A. B.
Gertrude Oren Hunnicutt, A. B.	Frank Everett Reed, A. B.
Joseph Jacobs, B. C. E.	Alva Leslie Sloan, B. C. E.
Vernon Lyman Kellogg, M. S.	Lawrence Theodore Smith, B. S.
Edwin Eberhard Squires, B. S.	

CLASS OF 1890.

Walter Root Armstrong, A. B.	*Marcella Howland, A. B.
Emma Bartell, B. S.	Fred. Liddeke, A. B.
Harvey F. M. Bear, B. S.	Charles Stone McFarland, B. C. E.
Schuyler Colfax Brewster, B. S.	Frederick Scott Pickering, B. C. E.
Neil C. Brooks, A. B.	Harry Radcliff, B. S.
Abraham Lincoln Burney, A. B.	Florence Reasoner, A. B.
B. J. Dalton, B. C. E.	William Henry Reynolds, B. S.
Emma G. (Dunn) Wilmoth, B. C.	John Anderson Rush, M. S., LL. B.
Daniel Edward Esterly, B. S., M. D. (Pennsylvania).	Richard H. Short, B. C. E.
Harriette Augusta Fellows, A. M.	Edward Emery Slosson, M. S.
Nettie Delilah Goodell, B. S.	Edward Fisk Stimpson, B. S.
Leland DeForest Henshaw, B. C. E.	Helen Binnering Sutliff, A. B.
William Hill, A. B.	Inez Lorena Taggart, A. M.
Park Austin Williamson, B. C. E.	Campbell McGhie Watson, A. B.

CLASS OF 1891.

Marshall Albert Barber, A. B., A. M. (Harvard).	Irving Haskell Morse, B. S.
Justin DeWitt Bowersock, B. S., LL. B. (Harvard).	Galen Frank Nichols, B. S., LL. B.
Charles Parsons Chapman, A. B.	Frank Hart Olney, A. B.
James Frank Craig, A. B.	Anne Reese Pugh, A. M.
May Ibella (Hair) Culver, A. B.	Martin Everett Rice, M. S.
Walter Scott Hayden, A. B.	Herbert Fuller Roberts, A. B.
Jessamine (Howell) Fugate, A. M.	Robert Anderson Rutledge, B. C. E.
Fred Homer Kellogg, A. B.	Frank Charles Shrader, B. S., M. S.
Laura E. Lockwood, A. M.	Effie June Scott, A. B.
Malcolm McKinnon, A. B.	William Appleton Snow, M. S.
	Virginia E. Spencer, A. M., B. D.
	Maude Estella Springer, A. B.

CLASS OF 1892.

Harold Barnes, A. B.	James Franklin Noble, A. B., LL. B. (Northwestern).
Robert Diamond Brown, A. B., LL. B. (Northwestern).	Dwight Elwood Potter, A. B.
William Wallace Brown, A. B.	James Herbert Sawtell, A. B.
Albert Luther Candy, A. M.	Samuel McClay Simmons, A. B.

Howard Elijah Copper, A. B.	Belle Lundie Spencer, A. B.
Millia Alice Crotty, A. B.	Carrie Taylor Stewart, A. B., A. M.
Ova Portis Davis, A. B.	(Michigan).
James Edward Dyche, A. B.	Martha Alice Thompson, A. B.
Elmer Franklin Engel, A. B.	Walter Truitt, A. B.
Herbert Spencer Hadley, A. B.,	George Olien Virtue, A. B., A. M.
LL. B. (Northwestern).	(Harvard).
Charles H. Johnson, A. B., M. D.	Ernest Pratt Wellman, A. B.
Mary Harriet Wellman, A. M.	

CLASS OF 1893.

George Irving Adams, A. M.,	Francis Joseph Lange, A. B.
Ph. D. (Princeton).	Frank Amanda Lutz, A. B.
Cora Elmira Becker, A. B.	Edith (Manley) Chappelle, A. M.
Josephine Thorndyke Berry, A. B.	Nellie Vie Morris, A. B., LL. B.
Nina Claire Bowman, A. B.	James Owen, A. B.
Kate Blair, A. B.	Raphael Dorman O'Leary, A. B.
Ermine Cowles Case, A. M., M. S.	William Murray Raymond, A. B.
(Cornell), Ph. D. (Chicago).	William Wilkinson Reno, A. B.
Thornton Cooke, A. B.	*William Halderman Riddle, A. B.
Alberta Linton Corbin, A. B.	Henry Clay Riggs, A. B.
Parker William Cress, A. B.	Ernest Frank Robinson, A. B.,
William Melville Curry, A. B.	M. D. (Pennsylvania).
Grace Caroline Eaton, A. B.	Wilbert Davidson Ross, A. M.
Henry Fiegenbaum, A. B.	Maggie Sarah Rush, A. B.
Albert Fullerton, A. B.	Anna Louisa Schorer, A. B.
John Irving Hamaker, A. B., A. M.	Adrian Fisher Sherman, A. B.
(Harvard).	Elmer Eugene Soderstrom, A. B.
Ernest Clyde Hickey, A. B.	Daniel Hooker Spencer, A. B.
Mayo Ellsworth Hickey, A. B.	Eugene William Springer, A. B.
Samuel John Hunter, A. M.	Chauncey Vaniman, A. B.
Edna Jones, A. B.	Russell Ripley Whitman, A. B.
Henry Richardson Linville, A. B.,	Josie Wilson, A. B.
A. M. (Harvard).	Jacob Good Wine, A. B.

CLASS OF 1894.

James Edward Baker, A. B.	Archie Hogg, A. B., LL. B.
Mary Wager Barkley, A. B.	Frederick Noble Howell, A. B.
Rollin Elliott Blackman, A. B.	Henry Otto Kruse, A. B.
Schuyler Colfax Bloss, A. B.	Lloyd A. Lowther, A. B.
Clara Sears Bosworth, A. B.	James Vance May, A. B.
Fred Erskine Buchan, A. B., LL. B.	Stella May (Miller) Neal, A. B.
Thomas Walter Butcher, A. B.	Frank Horace Moore, A. B., LL. B.
Eli Cann, A. B., LL. B.	(Columbia).
John Felix Carlson, A. B.	Rose Ruth Morgan, A. B.
Winifred (Churchill) Owen, A. B.	John Mustard, A. B.
Arthur Linton Corbin, A. B.	*Edward Isaac O'Bryon, A. B.
Alvan Harvey Couch, A. B.	Ezra W. Palmer, A. B.
MacGregor Douglas, A. B.	Wm. Henry Harrison Piatt, A. B.,
William Cornelius Fogle, A. B.	LL. B.
Albert Osburn Garrett, A. B.	Sherman Ploughe, A. B.
Charles Sumner Griffin, A. B.,	Laura Radford, A. B.
A. M. (Harvard).	Kate Louise Riggs, A. B.
Eleanora Harris, A. B.	Irvin R. Rothrock, A. B., A. M.
Edward Harvey, A. B.	George Alex. Schumaker, A. B.
Mary K. (Haskell) Holmes, A. B.	*Lorin Beecher Sears, A. B.
Nelle Susannah Hawkins, A. B.	May Hotchkiss Spencer, A. B.

* Deceased.

Burrit Howell Hill, A. B.	Nancy Clarinda Spencer, A. B.
Robert Lee Hoff, A. B.	Luther Elias Thrasher, A. B.
Henry Dent Wilson, A. B.	

CLASS OF 1895.

Maurice Le Roy Alden, A. B.	Adelia Alice Humphrey, A. B.
Kate Anderson, A. B.	Sheffield Ingalls, A. B.
Anna Burnett Banks, A. B.	Carl Edward Kimpton, A. B.
Frank Clarence Bowker, A. B.	Effie Loader, A. B.
Silas Scholl Brown, A. B.	Margaret Menet, A. B.
Clarence Alexander Burney, A. B.	J. Frank Messenger, A. B.
Fred Cahill, A. B.	Harrison William Miller, A. B.
May Carpenter, A. B.	Clyde Winwood Miller, A. B.
Edith M. Clarke, A. B.	John DeMott Miller, A. B.
John Daniel Clear, A. B.	Luella C. Gladys Moore, A. B.
Ralph Waldo Cone, A. B.	William Moore, A. B.
Walter Richard Crane, A. B., A. M.	Stanton Olinger, A. B.
William Christian Dick, A. B.	Daisy Orton, A. B., Mus. B.
Breese Morse Dickinson, A. B.	Byron Lee Pampel, A. B.
John Addison Edwards, A. B.	Florence Emma Parrott, A. B.
Franc R. (Fellows) Stimpson, A. B.	Bertha Peterson, A. B.
John Austin Frazier, A. B.	Elmer Ellsworth Rush, A. B.
Lillie May Freeman, A. B.	Madge Schaum, A. B.
Ella Funston, A. B.	Theophilus H. Scheffer, A. B.
Wilbur Ludington Gardner, A. B.,	Mabel Scott, A. B.
LL. B.	Etoile Simons, A. B.
Eva Clarissa Gill, A. B.	Lucinda Smith, A. B.
Edward T. Hackney, A. B.	Clarence Talbot Southwick, A. B.
John Galentine Hall, A. B.	Mary Marendra Spencer, A. B.
John Lyle Harrington, A. B.	Sadie Melinda Stone, A. B.
Edith (Haskell) Burney, A. B.	Peter J. Wedel, A. B.
Matilda (Henrichs) O'Leary, A. B.	Samuel A. M. Young, A. B.
Augustus P. Zeller, A. B.	

CLASS OF 1896.

Alfred Cecil Alford, A. B.	John Frederick Kinzie, A. B.
Daisy Alison, A. B.	William Newton Logan, A. B., A. M.
Burtis Burr Breese, A. B.	Elmer Charles Ludlum, A. B.
Frederick William Brewster, A. B.	Robert Thornton Madden, A. B.
Grace Hannah Brewster, A. B.	William Joseph Madden, A. B.
Clydus Clinton Brown, A. B.	William Joseph Magaw, A. B.
Mary Burd, A. B.	Francis Kearney Moon, A. B.
Hardin Price Butcher, A. B.	Clarence Irwin McClung, A. B.
Rudolph Caughey, A. B.	Ward Carpenter McCroskey, A. B.
Peter A. Claassen, A. B.	Arthur McMurray, A. B.
Carina Antoinette Cooke, A. B.	Maude Estelle Nichols, A. B.
Mary Jane Dillard, A. B.	Larrance Page, A. B.
Anna Gosline Edwards, A. B.	James Horace Patten, A. B.
Leander Dallas Ellis, A. B.	Helen Perry, A. B.
Dean Foster, A. B.	Sydney Clarke Prentice, A. B.
Oscar James Fryar, A. B.	Cassie Alma Quinlan, A. B.
Albert B. Glathart, A. B.	Fred Newton Raymond, A. B.
Ralph Curtis Gowell, A. B.	Elmer Samuel Riggs, A. B., A. M.
Aaron George Grant, A. B.	Alice Rohe, A. B.
Walter Griffiths, A. B.	Alban Stewart, A. B.
Mabel (Hall) Templin, A. B.	John R. Thierstein, A. B.
Fred Ketcham Hammers, A. B.	Blanche Isabel Thoburn, A. B.

* Deceased.

Linda Hardy, A. B.	Agnes Thompson, A. B.
John H. Henderson, A. B.	Louise Isabella Towne, A. B.
Irving Hill, A. B.	Carl E. Wallace, A. B.
Rhoda Lulu Hoover, A. B.	Eva Way, A. B.
Frank E. House, A. B.	Dora Estella White, A. B.
Joseph Warren Hullinger, A. B.	Frank R. Whitzel, A. B., A. M.
Charles Edward Johnson, A. B.	Carl Wick, A. B.

School of Engineering.

(This school was organized in 1891. The graduates in the engineering courses preceding that date are repeated here.)

- Class of 1873.—Murray Harris, A. B.
 Class of 1874.—Ellis B. Noyes, A. B.
 Class of 1875.—Frank P. MacLennan, M. S.
 Class of 1877.—George Will Hapgood, B. S.
 Class of 1878.—Hugh Tudor Richards, C. E.
 Class of 1880.—Franklin Riddle, M. S., C. E.
 Class of 1881.—Edward Gleason Smith, B. S.
 Class of 1883.—Robert Murdaugh Osmond,* B. S.
 Class of 1884.—Albert Stanley Riddle, B. S.
 Class of 1885.—Henry Fremont Smith, B. S.
 Class of 1886.—Arthur L. Adams, B. S., Richard Birbeck, B. S., Frank Thompson Oakley, B. S.
 Class of 1887.—Robert Lynn McAlpine, B. C. E.
 Class of 1888.—Fred Holmes Bowersock, B. C. E., Paul Goddard, B. C. E., Owen Cyrus Le Seur, B. C. E., Frank John Savage, B. C. E., Clarence Elestus Springer, B. C. E.
 Class of 1889.—Joseph Jacobs, B. C. E., Alva Leslie Sloan, B. C. E.
 Class of 1890.—B. J. Dalton, B. C. E., Frederick Scott Pickering, B. C. E., Harry Radcliff, B. S., William Henry Reynolds, B. S., Richard H. Short, B. C. E., Leland DeForest Henshaw, B. C. E., Charles Stone McFarland, B. C. E., Edward Fisk Stimpson, B. S., Park Austin Williamson, B. C. E.

CLASS OF 1891.

Robert Anderson Rutledge, B. C. E.

CLASS OF 1892.

Eugene Wilson Caldwell, B. S.	Charles Warnock Frederick, B. S.
Arthur Osborne Ridgeway, B. S.	John Mason Robinson, B. S.

CLASS OF 1893.

Dennett Elijah Babbitt, B. S.	Ernest Blaker, B. S.
William Lester Brayton, B. S.	John Edward Curry, M. S., C. E.
Frank Ringer, B. S.	Roy Roscoe Rodgers, B. S.

Dana Templin, B. S., M. S.

CLASS OF 1894.

Richard William Carter, B. S.	William Henry Kutz, B. S.
Lloyd Duffee, B. S.	Alfred Douglass Ludlow, B. S.
Herbert Henry Johnson, B. S.	Alanson Niles Topping, B. S.

* Deceased.

CLASS OF 1895.

John Penn Cracraft, B. S.	*Charley Jacob Kitzmiller, B. S.
Arthur Ulysses Craig, B. S.	John Alouis Lahmer, B. S.
Arthur William Cunningham, B. S.	Hugh Graham Landis, B. S.
John Lyle Harrington, B. S., C. E.	Ned Ernest Newton, B. S.
James Judson Harding, B. S.	George Meade Soxman, B. S.
Geo. Thomas Herrington, B. S.	Orah Kilburn Williamson, B. S.
James Cezanne Kelsey, B. S.	Henry Jay Withington, B. S.

CLASS OF 1896.

George Rockwell Albers, B. S.	Lawrence Norton Morscher, B. S.
Charles Webster L. Armor, B. S.	Albert Vincent Schroder, B. S.
Charles Corwin Crew, B. S.	William John Squire, B. S.
Frederick Percy Daniels, B. S.	Henry William Wagner, B. S.

Normal Department.†

CLASS OF 1877.

Alla M. (Barnes) Foster.	Lizzie A. Stanley.
Mary A. Brannen.	Emeline (Upton) Vaughn.
N. Elizabeth Burbank.	Anna L. Varney.
Mary R. (Dillon) Miller.	Eudora (Wade) Garrett.
Karl A. Floden.	Charlotte C. (Warren) Cahlan.
Henry S. Harvey.	Almira Wood.

Mary E. (Murphy) Beckey.

CLASS OF 1879.

Ella Pearson.	Alma (Richardson) Wallace, B. A.
Frank Prentiss, B. S., B. D.	Samuel M. Smith, B. A.

CLASS OF 1880.

Jessie A. Austin, B. A.	Ellen Hill.
Helen W. (Bay) Raymond, B. A.	Bion S. Hutchins, B. A.
Henry V. Chase, B. S.	Alfred E. Parker, B. S.
Abbie Coltrane.	Carrie M. Watson, B. A.

CLASS OF 1881.

Caroline (Bauman) Spangler.	Charles Dana Hawkins.
Lizzie Flora Farr.	Rosetta Haworth.
*Mary E. (Gamble) Presby.	Anna Lydia Moore.
Charles Green Upton, B. S.	

CLASS OF 1882.

Ella Kempthorne.	Emery Frederick Stanley.
Mary Belle Parker.	Lindley Murray Spray, B. A.

CLASS OF 1883.

Frank Howard Clark, B. D.	Ella (Coltrane) Spray.
Mary Ann Davis, B. D.	Glen Lewis Miller, A. B., B. D.
Eveoline Gano, B. D.	Ann Eliza Murphy, B. S., B. D.
Chloe (Haworth) Coyle, B. D.	George Earle Rose.
Edward C. Little, B. A., B. D.	John Lincoln Shearer, B. D.
Mina Elizabeth (Marvin) Wilcox, William S. Whirlow, B. S., B. D.	
M. A., B. D.	

*Deceased.

†This department was closed by act of the legislature, in 1885.

CLASS OF 1884.

Phebe (Ashley) Clark, B. D.	*Emma Jane (Kempthorne) Scott.
Eugene L. Cowdrick, B. D.	Minnie Clark Jay, B. D.
Eva Halstead.	Charles Samuel Metcalf.
Margaret C. (Hemphill) Smith, B. D.	Lulu (Miller) Smyth.
Cora Viola Henshaw.	Elma Newby.
William H. Johnson, A. M., B. D.	Augusta Hannah Pierson.
Nettie Angeline (Hubbard) Boles, B. S., B. D.	Olin Templin, A. M., M. S.

CLASS OF 1885.

Harriet Alice Black.	Harriet Clark Hulick, B. S., B. D.
Ada Eleanor Briggs, A. M., B. D.	Anna Elizabeth Loy.
Blanche Ketene Bruce, A. B., B. D.	Hiram Barton Martin, B. D.
Samuel Marion Cook, A. B., B. D.	Matthew Edgar Pierson.
Jennie Divelbess.	John Paul Rote, A. B., B. D.
*Flora Belle Eddy.	Martha Alice Thompson, B. D.
Millard Lincoln Field, B. D.	Harriet Tracy Williams, A. B., B. D.
Clara (Greenameyer) Hagar, B. D.	Ida May (Wade) Starr.

School of Law.

ALUMNI ASSOCIATION.

ALFRED FIDLER, '88,	<i>President.</i>
JOHN H. ALBACH, '86,	<i>Vice-President.</i>
E. E. HOPKINS, '93,	<i>Secretary and Treasurer.</i>

CLASS OF 1880.

George M. Degroff, LL. B.	Will J. Neill, LL. B.
Rufus A. French, LL. B.	Lucius H. Perkins, LL. B.
Thomas H. Kennedy, LL. B.	Samuel C. Usher, LL. B.
Frank E. Larimer, LL. B.	George W. W. Yates, LL. B.

CLASS OF 1881.

Leo James Barr, LL. B.	Arthur Lewis Hayes, LL. B.
Walter Mackey Duff, LL. B.	Benjamin Franklin Surface, LL. B.

CLASS OF 1882.

Arthur Cornforth, LL. B.	Charles Augustus Haskins, LL. B.
Joseph Mallen Gray, LL. B.	*John Thomas Harlow, LL. B.
Thomas Franklin	Richmond, LL. B.

CLASS OF 1883.

Wm. Leonard Porter Burney, LL. B.	*Edwin Delmar Goodin, LL. B.
Ernest James Cooper, LL. B.	Numa Wesley Wells, LL. B.

CLASS OF 1884.

Leander L. Davis, LL. B.	Francis Wylie Marlin, LL. B.
Frank Exline, LL. B.	Harry Miller Marquis, LL. B.
Charles Frederick Foley, LL. B.	Ezra McCord Shinkle, LL. B.
James F. Major, LL. B.	*Howard Trego Smith, LL. B.

CLASS OF 1885.

Van Fremont Boor, LL. B.	Isaac Albert Rigby, LL. B.
James N. Davis, LL. B.	William Cornelius Spangler, LL. B.
James Alex. Hutcheson, LL. B.	Joseph Richard Turner, LL. B.
Joshua Wilson, LL. B.	

* Deceased.

CLASS OF 1886.

John Henry Albach, LL. B.	Frank Day Hutchings, A.B., LL.B.
Harry Ballinger, LL. B.	Edward C. Little, A. B., LL. B.
William B. Brownell, A. B., LL. B.	Scott Mitchell, LL. B.
John William Hall, LL. B.	Walter Cyrenus Stevens, LL. B.
Elmer Ellsworth Hartley, LL. B.	Walter Winfield Scott, LL. B.
James Booth Van Vliet, LL. B.	Benjamin Franklin Talbott, LL. B.

CLASS OF 1887.

Isaac Francis Bradley, LL. B.	Benjamin F. Hutchins, LL. B.
Robert Woods Blair, LL. B.	William Jay Jackson, LL. B.
*Dan Andrew Crew, LL. B.	John Groff Miller, LL. B.
Joseph Thomas Dickinson, LL. B.	Samuel Wallace Moore, LL. B.
George Wendle Frolick, LL. B.	Frederick Shearer Pentzer, LL. B.
James Buchanan Harris, LL. B.	John Sullivan, LL. B.

CLASS OF 1888.

Alfred Fidler, LL. B.	Sterling Price King, LL. B.
Solon Thacher Gilmore, A.B., LL.B.	David Emory Palmer, LL. B.
Chas. Ellsworth Harbaugh, LL. B.	Howard Allen Peairs, LL. B.
William Anthony Jackson, LL. B.	Emery Scott Rice, LL. B.
Benjamin Jacobs, LL. B.	John William Roberts, LL. B.
	William Staples Wolley, LL. B.

CLASS OF 1889.

Samuel D. Bishop, LL. B.	John Wilbur McIlravy, LL. B.
Edwin S. Earhart, LL. B.	Alexander Clark Mitchell, LL. B.
Cornelius Martin Enns, LL. B.	William Thomas Nelson, LL. B.
Willis Harry Finfrock, LL. B.	Thomas Allen Pollock, LL. B.
Lee Moore Gray, LL. B.	Jesse Clayton Shuman, LL. B.
Grant W. Harrington, A. B., LL.B.	Lee C. Spooner, LL. B.
Bruno Hobbs, LL. B.	Louis Abyram Stebbins, LL. B.
Richard Scott Horton, LL. B.	John Martin Wayde, LL. B.

CLASS OF 1890.

Earnest L. Ackley, LL. B.	Thomas D. Leib, LL. B.
Cranston W. Butterworth, LL. B.	Joseph G. Littick, LL. B.
Albert Caughey, LL. B.	Daniel Mallison, LL. B.
Daniel J. Coy, LL. B.	Frank D. Merriam, LL. B.
Porter Edminster, LL. B.	James Nichols, LL. B.
Thomas J. Flannelly, LL. B.	Louis C. Poehler, LL. B.
Charles Farrow, LL. B.	Frank M. Power, LL. B.
William Henry Herdman, LL. B.	William W. Russ, LL. B.
Robert E. Lee Herdman, LL. B.	William H. Sears, LL. B.
Howard M. Hill, LL. B.	Percy C. Simons, LL. B.
Russell Whitelaw Houk, LL. B.	Charles W. Wallis, LL. B.
Wallace W. Lawton, LL. B.	Seba C. Westcott, LL. B.
	Alva L. Wilmoth, LL. B.

CLASS OF 1891.

John Hames Boucher, LL. B.	Brett Wendell Jaquith, LL. B.
Clifford D. Bower, LL. B.	David Lewis Jones, LL. B.
Ella White Brown, LL. B.	Preston Rufus King, LL. B.
Austin Curtis Cunkle, LL. B.	Judah Lincoln Mack, LL.B.
Edward C. Dowling, LL. B.	John Paxton McLaughlin, LL. B.
Edward Clingan Finney, LL. B.	John Wesley Mertz, LL. B.
Thomas Anderson Finical, LL. B.	William Ludovic Palm, LL. B.
James Ammie Flint, LL. B.	*Walter Herbert Starkey, LL. B.

William Anderson Foster, LL. B. John Stowell, LL. B.
 Alvah John Graham, LL. B. William Bolden Townsend, LL. B.
 Francisco Antonio Gutierrez, LL. B. Arthur Gordon Webster, LL. B.

CLASS OF 1892.

Herbert L. Armstrong, LL. B.	John Jackson Jones, LL. B.
Elmer Seward Bessey, LL. B.	Orin Jacob Lamm, LL. B.
Jarvis Amos Blume, LL. B.	Ira Holmes Lookabaugh, LL. B.
Eldie Franklin Caldwell, LL. B.	Andrew Jackson May, LL. B.
Fred Walter Casner, LL. B.	William Abram Pennington, LL. B.
William Sherman Cline, LL. B.	Isaac Adson Price, LL. B.
Edward Reuben Fisher, LL. B.	Samuel Pettijohn Ridings, LL. B.
Jesse George, LL. B.	James Rudolph Stanley, LL. B.
Albert Covey Glenn, LL. B.	Ernest Quincy Stilwell, LL. B.
Frank L. Graham, LL. B.	Thomas McClellan Sullivan, LL. B.
Clad Hamilton, LL. B.	Philip Logan Swartzell, LL. B.
Frank Oscar Hellstrom, LL. B.	Benjamin Milroy Russell, LL. B.
Fred S. Jackson, LL. B.	James Amizi Walker, LL. B.
Roscoe Howard Jaquith, LL. B.	Dennis H. Wilson, LL. B.
Frank George	Jewett, LL. B.

CLASS OF 1893.

Fred Devere Boyce, LL. B.	Lawrence James Mason, LL. B.
Solomon Ernest Bronson, LL. B.	James Hamilton Mitchell, LL. B.
James Lancaster Byrnes, LL. B.	Arthur William Munt, LL. B.
William Thomas Dias, LL. B.	Robert William McGrath, LL. B.
Jesse James Dunn, LL. B.	Guy Connolly McKinley, LL. B.
George Washington Ellis, LL. B.	Robert William McGrath, LL. B.
Gordon Louis Finley, LL. B.	Walter Pleasant, LL. B.
Walter Evans Gray, LL. B.	Jabez Otterbein Rankin, LL. B.
Robert Morton Hamer, LL. B.	William Joseph Reeks, LL. B.
Fred Prosser Hill, LL. B.	John Andrew Rush, LL. B.
Abraham Lincoln Herr, LL. B.	Clarence Houden Sears, LL. B.
George Luther Hines, LL. B.	Charles Stephens, LL. B.
Edward Everett Hopkins, LL. B.	Alvin Verling Sharpe, LL. B.
Charles Todd Kennedy, LL. B.	Henry Lawrence Sturgeon, LL. B.
Lester Kirk, LL. B.	Frank Ray Swarens, LL. B.
James Francis Lawson, LL. B.	Clarence Chris. Swarens, LL. B.
Charley Aubrey Locke, LL. B.	Ernest Wright Tatman, LL. B.
Leonard Thomas Mahew, LL. B.	Ira Kent Wells, LL. B.
Chancellor Thurlow Morgan, LL. B.	Albert Thaine Weatherby, LL. B.
William Starrett McClintock, LL. B.	Fred. Columbus West, LL. B.
George Weldon Wolf, LL. B.	

CLASS OF 1894.

Thomas Drew Bennett, LL. B.	William Brooks, LL. B.
Ralph Emerson Campbell, LL. B.	James Milbank Challiss, LL. B.
Iraton Everett Cox, LL. B.	Albert Thompson Cox, LL. B.
Arthur Fulton Cranston, LL. B.	Walter Perry Davidson, LL. B.
Aloysius Edward Dempsey, LL. B.	Edward Robert Evans, LL. B.
Jesse Carl Foulks, LL. B.	Pliny Marcus Harmon, LL. B.
William Edward Higgins, LL. B.	Joseph Harry Hilton, LL. B.
Jacob Madison Holmes, LL. B.	Essington Herbert Lees, LL. B.
Charles Franklin Humphrey, LL. B.	Rufus Edmond Melvin, LL. B.
Albert Russell Miller, LL. B.	Schuyler Colfax Morgan, LL. B.
Thomas James Norton, LL. B.	James Alexander Orr, LL. B.
Leonard A. Parké, LL. B.	John Fred Peters, LL. B.

Mrs. May Phillips, LL. B.
Oscar Raines, LL. B.
Joseph Shaffer, LL. D.
John Strosnider, LL. B.

Walter E. Railsback, LL. B.
Thomas Sherman Salathiel, LL. B.
Wm. H. Harrison Sproul, LL. B.
Ernest Pratt Wellman, LL. B.

CLASS OF 1895.

Edgar Bennett, LL. B.
*John Allison Bennett, LL. B.
John Ellsworth Blake, LL. B.
Francis Milligan Brady, LL. B.
Fred Erskine Buchan, LL. B.
Chas. Albert Budd, LL. B.
Eli Cann, LL. B.
Fred Adam Clarke, LL. B.
John Lyman Cramer, LL. B.
Dudley W. Eaton, LL. B.
Presley Emmett Ferbrache, LL. B.
Frank Fabius Fleming, LL. B.
Charles Herbert Galvin, LL. B.
Marshall Alexis Gorrill, LL. B.
William Philip Greene, LL. B.
Wm. Marshall Hawkins, LL. B.
Claude Vincent Hickman, LL. B.
John J. Hildreth, LL. B.
Chas. King Holliday, LL. B.
Charles Francis Jackson, LL. B.
John Martin Johnson, LL. B.
John Francis Kerrigan, LL. B.
Frank Fenimore Lamb, LL. B.

Corydon Endsley Lindley, LL. B.
John Eber Little, LL. B.
Otis Franklin Lyngar, LL. B.
Hugh Means, LL. B.
Rolla Ray Mitchell, LL. B.
James Pleasant Morgan, LL. B.
Galen Nichols, LL. B.
James Owens, LL. B.
Frank Lincoln Peairs, LL. B.
Elmer Nathaniel Powell, LL. B.
Charles Addison Prentiss, LL. B.
Frank Stevens Richardson, LL. B.
Jacob C. Ruppenthal, jr., LL. B.
Art. Bigelow Schaeffer, LL. B.
Albert David Schreiner, LL. B.
Wilford Wayne Simon, LL. B.
James Louis Steele, LL. B.
Thomas Corwin Turner, LL. B.
Frederick Benj. Wheeler, LL. B.
Charles Leighton Wilson, LL. B.
William Henry Winter, LL. B.
Adolph W. Wulfekuhler, LL. B.
Louis Herman Wulfekuhler, LL. B.

William H. Wynn, jr., LL. B.

CLASS OF 1896.

Anna May Beveridge.
Felix Edward Brady.
Ralph Emmett Chadwick.
John Warren Clark.
William Long Cowden.
Isaac Franklin Crowe.
Ethelbert Howard Cullison.
Mina Perky Dias.
Cornelius Houseman Elting.
J. Homer Foresman.
Wilbur Ludington Gardner.
William Burtner Gladfelter.
Jess Reynolds Hitchcock.
Archie Hogg.
David B. Holler.
Alexander Dow Johnson.
Calvin H. Leonard.
Will Harrison Light.

Robert C. Manley.
William Harris Mason.
Louis Herman Menger.
Robert Abraham Pearson, LL. B.
William Henry Harrison Piatt.
Warner St. Clair Pope.
Archibald Robert Query.
William Chalmers Ralston.
Michael Edward Roark.
Robert Ingersoll Roark.
William Andrew Rogers.
Thomas Willard Simmons.
John Andrew Simpson.
William D. Snell.
Arthur Henley Symons.
Cloyd Roscoe Troxel.
John W. Tucker.
William James Watson.

* Deceased.

School of Pharmacy.

CLASS OF 1886.

Harry Legate Raymond, Ph. G. Carl Lewis Wyler, Ph. G.
 Edward Bayless Fox, Ph. G.

CLASS OF 1887.

Harry Perry Applebaugh, Ph. G. Samuel Watson Lindsley, Ph. G.
 Charles C. Dailey, Ph. G. Martin O'Donnell, Ph. G.
 William Scott Dick, Ph. G. Frank Prentiss, B. S., Ph. G.
 *John Henry Deford, Ph. G. Charles Loyal Sexton, Ph. G.
 Claude Britton Highbargin, Ph. G. Andrew Jackson Smith, Ph. G.
 Clarence Remsen Hoadley, Ph. G. Thomas Herbert Wood, Ph. G.
 Corydon Endsley Lindsley, Ph. G. Albert F. Wulfekuhler, Ph. G.

CLASS OF 1888.

Frank Lincoln Abbey, Ph. G. John Williams Root, Ph. G.
 William Clarence Albach, Ph. G. Charles Borden Spencer, Ph. G.
 Herbert M. Herrold, Ph. G. Arthur Ellsworth Topping, Ph. G.
 George McLaren. Robert James McClure, Ph. G.
 Ernest R. Rankin, Ph. G. George Francis Weida, B. S., Ph.D.
 Mary Antoinette Rice, Ph. G., A.B. (Johns Hopkins).

CLASS OF 1889.

Bradford Loring Hill, Ph. G. Edward William Morris, Ph. G.
 Willard B. Hilton, Ph. G. Robert Parker, Ph. G.
 Ernest Himoe, Ph. G. John Nesbitt Scott, Ph. G.
 Denton Hogeboom, Ph. G. Loren Wade Snapp, Ph. G.
 George Frederic Kaiser, Ph. G. Alfred T. Webb, Ph. G.

CLASS OF 1890.

Volney T. Boaz, Ph. G. Samuel J. Kelly, Ph. G.
 *John D. Claassen, Ph. G. Carl Phillips, Ph. G.
 Benjamin F. Fiegenbaum, Ph. G. Arthur W. Thomas, Ph. G.

CLASS OF 1891.

Wilbur Stanton Amos. John H. Kennedy, Ph. G.
 William Pierson Brown, Ph. G. Peter Muller.
 Leroy S. Hackett, Ph. G. Robert Pollock, Ph. G.
 Florence Luella Hedge, Ph. G. William Patterson Pugh, Ph. G.
 James Wilson Kennerley, Ph. G. Homer Albert White, Ph. G.

CLASS OF 1892.

Maude Beatrice Allen. Clarence Erwin McClung, Ph. G.
 Robert Combs, Ph. C. Marlin Samuel McCreight, Ph. G.
 Achille DeDonder, Ph. G. Carrie Priestly.
 Fred LaPorte Diggs, Ph. G. Victor Alexander Rankin, Ph. G.
 Alexander J. Eicholtz, Ph. G. Herbert John Rankin, Ph. G.
 John Edwards Youngberg, Ph. G.

CLASS OF 1893.

DeForest Baker, Ph. G. Alfred Poehler Rudiger, Ph. G.
 Louis House Bergman, Ph. G. Nelson Hughes Seiler, Ph. G.
 Harold Day, Ph. G. Ellsworth Frank Wallack, Ph. G.
 Calvin Delbert Lieurance, Ph. G. Robert Aeneas Watt, Ph. G.
 George Benjamin Norberg, Ph. G. Walter Everett Wilson, Ph. G.
 Homer Clifton Oatman, Ph. G. Alfred Youngberg, Ph. G.

* Deceased.

CLASS OF 1894.

Perry Bigelow Barber, Ph. G.	Austa Adele Northrup, Ph. G.
Mary Caroline Chapin, Ph. C.	James Edgar Northrup, Ph. G.
William Marshall Clark, Ph. G.	Fred. C. Oehler, Ph. G.
Henry Ernst, Ph. G.	Orin Herbert Parker, Ph. G.
George Ervin Haller, Ph. G.	Earl Ira Steinberger, Ph. G.
Herbert Edwin Jenkins, Ph. G.	William Orange Strother, Ph. G.
Charles Edwin Joslin, Ph. G.	Louis Charles Gilbert Voetzel, Ph. G.
Thomas Henry Kelly, Ph. G.	Brinton D. Woodward, Ph. G.

CLASS OF 1895.

Thomas Bailey, Ph. C.	Edward Ernest Cowman, Ph. C.
William Francis Bowen, Ph. C.	William Barnard Kelling, Ph. C.
Albert Burnam Clarke, Ph. C.	Edward Francis Schopflin, Ph. C.
Robert Edgar Stewart, Ph. C.	

CLASS OF 1896.

Clarence Alvin Carter, Ph. C.	Myron Robinson Mason, Ph. C.
John Lakin Dryden, Ph. C.	James Eugene McMahon, Ph. C.
Herbert Morton Fuller, Ph. C.	Leon Nagels, Ph. C.
Mark Ernest Gilmore, Ph. C.	Austa Adele Northrup, Ph. C.
Grace Lydia Hedges, Ph. C.	Charles Francis Palmer, Ph. C.
Henry B. Hogeboom, Ph. C.	William Osman Roberts, Ph. C.
William Richard Jacquemin, Ph. C.	Samuel M. Scheffer, Ph. C.
William H. Long, Ph. C.	Orta Wherrell, Ph. C.
James Mason Lear, Ph. C.	Eugene Peter Wohlfrom, Ph. C.
Chester Woodward, Ph. C.	

School of Fine Arts.

CLASS OF 1881.

Ella Kempthorne.

CLASS OF 1883.

Lillian G. (Bell) Mellon. Susa Hubbard Breck.

CLASS OF 1887.

Mabel Edith (Gore) Gleed, M. G., Mus. B.

CLASS OF 1888.

Bertha Nellie Atwood, M. G. Alice Haywood Ropes, M. G.

CLASS OF 1889.

John Crogan Manning, M. G.

CLASS OF 1892.

ARTISTS' COURSE.

Mrs. Ida Burr Bell, Mus. B.	Lillie May Hinman, M. G.
Manie Almerna Johnston, Mus. B.	Nina Jacqueline Taggart, M. G.
E. Geneve Lichtenwalter, Mus. B.	Alice Wynn, M. G.
Daisy Orton, Mus. B.	Helen (Wynne) Springer, M. G.
Jennie M. Weller, Mus. B.	

NORMAL COURSE.

CLASS OF 1893.

Lillie May Hinman, Mus. B.	Alice Beulah Whitman, M. G.
Sarah (Kaufman) Mus. B.	Jessie Hood, M. G.
Louise Tunnicliff Smith, Mus. B.	Juliet (Titsworth) Curry, Mus. B.
Mary Norris Berry, Mus. B.	

CLASS OF 1894.

Alice Lewette Litchfield, B. P.	Olive Pierson, B. P.
---------------------------------	----------------------

CLASS OF 1895.

Annie M. Parry Bundy, Mus. B.	Clara Belle Soxman, Mus. B.
Harriet Mary Gressinger, Mus. B.	Mattie Lulu Wilson, Mus. B.
Sarah Elizabeth Lingard, Mus. B.	Ulla Dell Olds, B. P.
Abbie Merriman Noyes, Mus. B.	Lilian Belle Simmons, B. P.

CLASS OF 1896.

Anna Adelia Drake, Mus. B.	Mary Katherine Crew, B. P.
Mary Reeder, Mus. B.	Mary Eleanor Riddle, B. P.

Donations.

March, 1896, to March, 1897.

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Vols.

American Bar Association, Philadelphia.....	1
American Pharmaceutical Association, Baltimore.....	1
Carruth, Prof. W. H., Lawrence.....	1
Connecticut Railroad Commissioners.....	1
Director of Missouri Botanical Garden, St. Louis.....	1
Henry, Stuart, Topeka.....	2
Hodder, Prof. F. H., Lawrence.....	1
Hopkins, Prof. E. M., Lawrence.....	2
Jio, Mamoru, Lawrence.....	1
Kansas State Board of Agriculture.....	1
Kansas State Charitable Institutions.....	8
Kansas State Historical Society.....	1
Kansas State Librarian.....	4
Miller, Hon. O. L., Washington, D. C.....	1
Miller, Prof. E., Lawrence.....	4
Minnesota Geological Survey.....	2
Missouri Geological Survey.....	1
Moore, Col. H. L., Lawrence.....	12
Smithsonian Institution, Washington, D. C.....	5
Snow, Miss Florence L., Neosho Falls.....	1
Stephens, Miss Kate, New York city.....	9
Stimpson, F. E., Lawrence.....	1
United States Bureau of Education.....	1
United States Commission of Fish and Fisheries.....	3
United States Department of Agriculture.....	12
United States Department of the Interior.....	14
United States Department of Labor.....	2
United States Department of State.....	12
United States Department of the Treasury.....	11
United States Department of War.....	1
United States Naval Observatory.....	2
Wilcox, Prof. A. M., Lawrence.....	1
Williston, Dr. S. W., Lawrence.....	1

NEWSPAPERS AND PERIODICALS FOR READING ROOM.

DAILIES.

Emporia Daily Gazette.....	Emporia.
Hutchinson News.....	Hutchinson.
Kansas City Journal.....	Kansas City, Mo.
Kansas City Gazette.....	Kansas City, Kas.
Kansas City Mail.....	Kansas City, Kas.
Lawrence Daily Journal.....	Lawrence.
Lawrence Daily World.....	Lawrence.
Leavenworth Standard.....	Leavenworth.
Newton Daily Republican.....	Newton.
Salina Daily Republican.....	Salina.
St. Joseph Herald.....	St. Joseph, Mo.
Topeka Daily Journal.....	Topeka.

WEEKLIES.

Abilene Weekly Chronicle.....	Abilene.
Abilene Monitor.....	Abilene.
Abilene Reflector.....	Abilene.
Alliance Herald.....	Fredonia.
Alma Enterprise.....	Alma.
Anthony Republican.....	Anthony.
Athenæum (Prof. A. M. Wilcox).....	London.
Baldwin Bee.....	Baldwin.
Baxter Springs News.....	Baxter Springs.
Beloit Gazette.....	Beloit.
Blue Mound Sun.....	Blue Mound.
Blue Rapids Times.....	Blue Rapids.
Burlington Republican.....	Burlington.
Burr Oak Herald.....	Burr Oak.
Caney Chronicle.....	Caney.
Chetopa Advance.....	Chetopa.
Christian Register.....	Boston.
Clay Centre Dispatch.....	Clay Centre.
Clay Centre Times.....	Clay Centre.
Clark County Clipper.....	Ashland.
Colony Free Press.....	Colony.
Concordia Daylight.....	Concordia.
Concordia Empire.....	Concordia.
Council Grove Republican.....	Council Grove.
Democratic Messenger.....	Eureka.
Dickinson County News.....	Abilene.
Dillon Republican.....	Dillon.
Dodge City Democrat.....	Dodge City.
El Dorado Republican.....	El Dorado.
Ellinwood Advocate.....	Ellinwood.
Enterprise Journal.....	Enterprise.
Eudora News.....	Eudora.
Eureka Union.....	Eureka.
Evangelical Visitor.....	Abilene.
Galena Republican.....	Galena.
Galena Times.....	Galena.
Garnett Journal.....	Garnett.
Garnett Republican Plaindealer.....	Garnett.
Girard World.....	Girard.
Great Bend Register.....	Great Bend.
Hazelton Express.....	Hazelton.
Holton Recorder.....	Holton.
Holton Tribune.....	Holton.
Horton Headlight.....	Horton.
Howard Courant.....	Howard.
Industrialist.....	Manhattan.
Iola Register.....	Iola.
Junction City Tribune.....	Junction City.
Junction City Sentinel.....	Junction City.
Kansas Advocate.....	Topeka.
Kansas City Mail.....	Kansas City, Kas.
Kansas Agriculturist.....	Wamego.
Kansas City Gazette.....	Kansas City, Kas.
Kansas Democrat.....	Hiawatha.
Kansas Farmer.....	Topeka.
Kansas Agitator.....	Garnett.
Kansas Patron.....	Olathe.
La Cygne Journal.....	La Cygne.

Lawrence Germania.....	Lawrence.
Lawrence Jeffersonian.....	Lawrence.
Linn County Republic.....	Mound City.
Lyons Republican.....	Lyons.
Marion Record.....	Marion.
Marion Times.....	Marion.
Marshall County News.....	Marysville.
McPherson Republican.....	McPherson.
Miami Republican.....	Paola.
Minneapolis Messenger.....	Minneapolis.
Minneapolis Review.....	Minneapolis.
Ness County News.....	Ness City.
Neodesha Register.....	Neodesha.
Neosho County Journal.....	St. Paul.
Neosho Falls Post.....	Neosho Falls.
Newton Kansan.....	Newton.
New York Voice.....	New York city.
Norton Courier.....	Norton.
Norton Champion.....	Norton.
Olathe Tribune.....	Olathe.
Ottawa Journal.....	Ottawa.
Oketo Herald.....	Oketo.
Paola Times.....	Paola.
People's Voice.....	Wellington.
Phillipsburg Herald.....	Phillipsburg.
Pleasanton Observer.....	Pleasanton.
Ponca City Courier.....	Ponca City, O. T.
Republican Traveler.....	Arkansas City.
Rooks County Record.....	Stockton.
Russell Record.....	Russell.
Salina Weekly Union.....	Salina.
Seneca Courier-Democrat.....	Seneca.
School and Home.....	Abilene.
South Kansas Tribune.....	Independence.
Star and Kansan.....	Independence.
Topeka Mail and Kansas Breeze.....	Topeka.
The Kansas Endeavorer.....	Topeka.
Tonganoxie Sentinel.....	Tonganoxie.
Union Signal.....	Chicago.
United Presbyterian.....	Pittsburg, Pa.
Wamego Times.....	Wamego.
Washington Post-Register.....	Washington.
Washington Palladium.....	Washington.
Washington Watchman.....	Washington.
Waverly Gazette.....	Waverly.
Western Spirit.....	Paola.
Weekly Call.....	Topeka.
Western Odd Fellow.....	Topeka.
Wellington Monitor-Press.....	Wellington.
Westmoreland Recorder.....	Westmoreland.
Wilson County Citizen.....	Fredonia.
Wichita Eagle.....	Wichita.
Winfield Courier.....	Winfield.
Wyandotte Herald.....	Kansas City, Kas.

MONTHLIES.

Advocate of Peace.....	Boston, Mass.
Bulletin of the American Mathematical Society (Prof. E. Miller).....	New York.
Johns Hopkins University Circulars.....	Baltimore, Md.
Kansas Churchman.....	Lawrence, Kas.
Merck's Bulletin.....	New York.
Musical Record.....	Boston, Mass.
Myers Bros.' Druggist.....	St. Louis, Mo.
National Druggist.....	St. Louis, Mo.
New England Druggist.....	Boston, Mass.
Ohio Meteorological Bureau, Report of.....	Columbus, Ohio.
Omaha Druggist.....	Omaha, Neb.
Pharmaceutical Era.....	Detroit, Mich.
Pharmaceutische Rundschau.....	New York.
Revue d' Histoire Litteraire (Prof. A. G. Canfield).....	Paris.
Rocky Mountain Druggist.....	Denver.
Western Druggist.....	Chicago.
Western Drug Record.....	Kansas City, Mo.
Western School Journal.....	Topeka.

QUARTERLIES.

Acta Mathematica (Prof. H. B. Newson).....	Stockholm, Swed.
Annals of Mathematics.....	Washington, D. C.

DEPARTMENT OF CIVIL ENGINEERING.

- Clarence E. Springer, Tacoma, Wash.: Photographs of bridge and canal work.
- J. A. L. Waddell, Kansas City, Mo.: 37 photographs of bridge construction, 11 sheets of bridge calculations, 9 detail drawings of bridges.
- H. J. Withington, Davenport, Iowa: 48 photographs of the Rock Island bridge, 1 set of detail drawings for the Rock Island bridge.
- H. V. Hinckley, Topeka, Kas.: Section of pile from foundation of old Kaw river bridge.
- Arthur O. Ridgeway, Pueblo, Colo.: 1 set of D. & R. G. R. R. standard plans.

ADDENDA.

To list of accredited schools, on page 27, add:

- STOCKTON HIGH SCHOOL, Stockton, C. E. Merwin, Superintendent.
- LOWELL ACADEMY, Lowell, Chas. E. Cosand, A. B., Principal.

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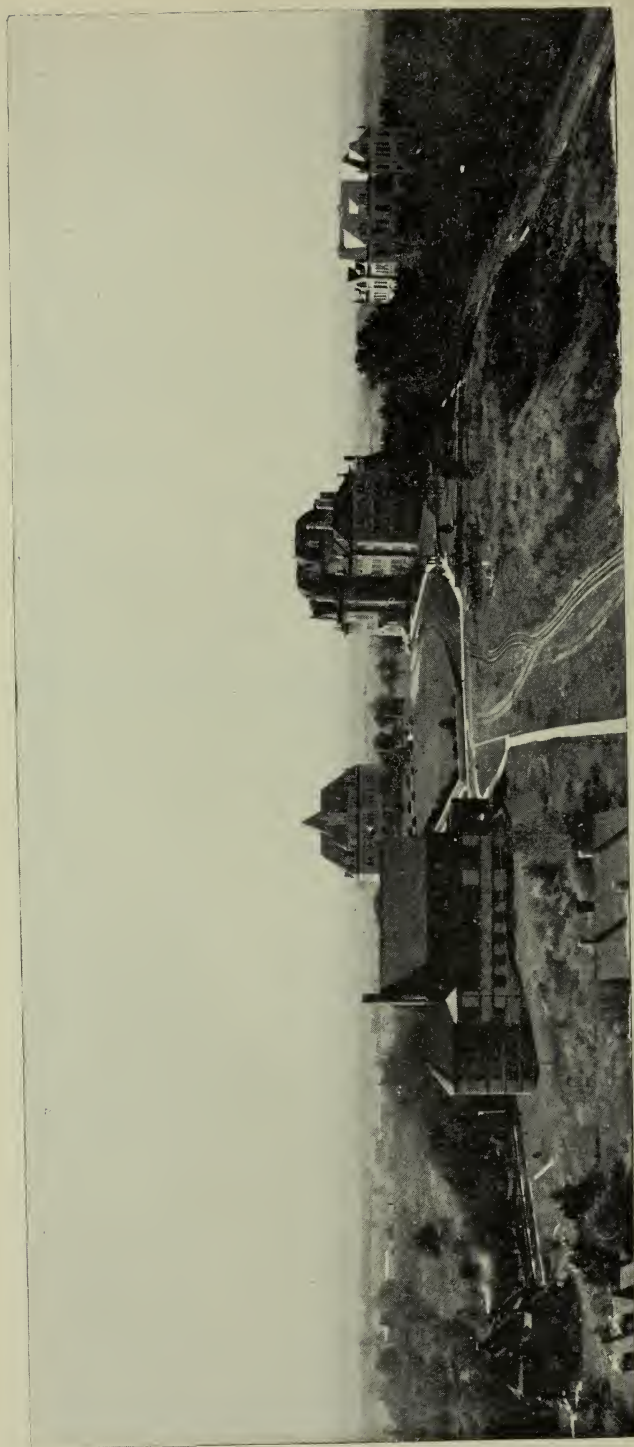
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GENERAL VIEW OF BUILDINGS AND GROUNDS.

THIRTY-SECOND ANNUAL CATALOGUE

OF THE

UNIVERSITY OF KANSAS

FOR THE YEAR 1897-'98.



LAWRENCE, KANSAS.
1898.

1898.							1899.						
JANUARY.							JULY.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
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2	3	4	5	6	7	8	3	4	5	6	7	8	9
9	10	11	12	13	14	15	10	11	12	13	14	15	16
16	17	18	19	20	21	22	17	18	19	20	21	22	23
23	24	25	26	27	28	29	24	25	26	27	28	29	30
30	31	31
FEBRUARY.							AUGUST.						
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13	14	15	16	17	18	19	14	15	16	17	18	19	20
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27	28	28	29	30	31
MARCH.							SEPTEMBER.						
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APRIL.							OCTOBER.						
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MAY.							NOVEMBER.						
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19	20	21	22	23	24	25	18	19	20	21	22	23	24
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JANUARY.							FEBRUARY.						
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MAY.							JUNE.						
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21	22	23	24	25	26	27	21	22	23	24	25	26	27
28	29	30	31	28	29	30	31

ANNOUNCEMENTS.

For 1898.

- Jan. 3, Monday—Christmas recess ends.
Jan. 24 to 28, Monday to Friday, inclusive—Semiannual examinations.
Jan. 31, Monday—Second term begins.
March 30, Wednesday—First half term ends.
March 31 to April 4, Thursday, Friday, and Monday—Spring recess.
April 5, Tuesday—Second half term begins.
May 30 to June 3, Monday to Friday, inclusive—Annual examinations.
June 2, Thursday—Commencement concert, by Music department, School of Fine Arts.
June 5, Sunday, 8 P. M.—Baccalaureate sermon.
June 6, Monday, 8 P. M.—Phi Beta Kappa address.
June 7, Tuesday, 8 P. M.—Annual Alumni address.
June 8, Wednesday, 10:30 A. M.—Commencement exercises.
-

For 1898-'99.

- Sept. 7, Wednesday—First term begins.
Sept. 7, 8, and 10, Wednesday, Thursday, and Saturday—Examination of candidates for admission, and presentation of certificates from high schools, academies, and other institutions.
Sept. 9, Friday—General assembly of students, and annual address in University Hall, at 10 A. M.
Nov. 10, Thursday—Second half term begins.
Nov. 24, 25, and 28, Thursday, Friday, and Monday—Thanksgiving recess.
Dec. 13, Tuesday, 8 P. M.—Christmas concert, by Music department, School of Fine Arts.
Christmas recess, Saturday, December 24, to Monday, January 9, inclusive.
Jan. 9, Monday—Christmas recess ends.
Jan. 23 to 27, Monday to Friday, inclusive—Semiannual examinations.
Jan. 30, Monday—Second term begins.
March 29, Wednesday—First half term ends.
March 30 to April 3, Thursday, Friday, and Monday—Spring recess.
April 4, Tuesday—Second half term begins.
May 29 to June 2, Monday to Friday, inclusive—Annual examinations.
June 1, Thursday—Commencement concert, by Music department, School of Fine Arts.
June 4, Sunday, 8 P. M.—Baccalaureate sermon.
June 5, Monday, 8 P. M.—Phi Beta Kappa address.
June 6, Tuesday, 8 P. M.—Annual Alumni address.
June 7, Wednesday, 10 A. M.—Commencement exercises.

ORGANIZATION AND GOVERNMENT.

By act of Congress, approved January 29, 1861, seventy-two sections of land were set apart and reserved for the use and support of a State University in Kansas. The state accepted the trust, and in an act approved March 1, 1864, provided as follows:

"SECTION 1. There shall be established in this state, at or near the city of Lawrence, in the county of Douglas, on the grounds secured for that purpose pursuant to the act entitled 'An act to locate the State University,' passed February 20, 1863, an institution of learning, under the name of THE UNIVERSITY OF KANSAS.

"SEC. 2. The object of the University shall be to provide the inhabitants of this state with the means of acquiring a thorough knowledge of the various branches of literature, science, and the arts."

The legislature of the state made further provision for the University in an act approved February 25, 1889, and entitled "An act to provide for the government and maintenance of the University of Kansas." This act, repealing all former legislation bearing upon the same topics, continues the name of THE UNIVERSITY OF KANSAS, and its location at LAWRENCE, in DOUGLAS COUNTY. It further enacts—

That the University shall provide the means of acquiring a general and thorough knowledge in literature, the sciences, and the arts; and also provide students who desire to pursue special studies with the most-approved appliances, authorities and instruction to insure the greatest knowledge and research in any special branch of learning connected with university education; that it shall consist of three departments: (1) A department of the literatures; (2) A department of the sciences; (3) A department of the arts; and that within these three departments there shall be established such schools as the Regents, in connection with the Faculty, may order. The same law further enacts that the government of the University shall be vested in a board of seven Regents, six of whom shall be appointed by the governor and confirmed by the senate, and whose term of office shall be four years; that the Board of Regents shall be a body corporate, under the name of "The Regents of the University of Kansas," and

as such may sue and be sued, make contracts, and hold and transfer property, both real and personal, for the University.

The Board of Regents is also invested with the power to elect a Chancellor, who shall be the chief officer of the University, and president of the Board of Regents, with the full power of a Regent; to appoint professors, assistants, tutors; to increase and diminish their numbers as the interest of the University may require; to employ a janitor, librarian, and such other officers and employees as in their judgment the needs of the University require.

The Board is also empowered to confer such degrees and grant such diplomas as are usually conferred and granted by other institutions of learning.

THE BOARD OF REGENTS.

CHANCELLOR F. H. SNOW.....	Lawrence.			
HON. C. F. SCOTT.....	Iola.....	Term expires	1899	
HON. J. W. FORNEY.....	Belle Plaine.....	"	"	1899
HON. F. G. CROWELL.....	Atchison.....	"	"	1899
HON. WM. ROGERS.....	Washington.....	"	"	1901
HON. J. P. SAMS.....	Seneca.....	"	"	1901
HON. H. S. CLARKE.....	Lawrence.....	"	"	1901

Officers of the Board.

F. H. SNOW.....	<i>President.</i>
J. P. SAMS.....	<i>Vice-President.</i>
C. F. SCOTT.....	<i>Secretary.</i>

Committees of the Board.

Instruction:

J. W. FORNEY.
C. F. SCOTT.
J. P. SAMS.

Library and Apparatus:

C. F. SCOTT.
H. S. CLARKE.
F. G. CROWELL.

Finance:

J. P. SAMS.
J. W. FORNEY.
WM. ROGERS.

Buildings, Grounds, and Supplies:

WM. ROGERS.
H. S. CLARKE.
F. G. CROWELL.

University Lands and Endowments:

H. S. CLARKE.
J. P. SAMS.
J. W. FORNEY.

Reports and Publications:

J. W. FORNEY.
C. F. SCOTT.
H. S. CLARKE.

Auditing of Accounts:

F. G. CROWELL.
J. P. SAMS.
WM. ROGERS.

Officers of the University.

F. H. SNOW.....	<i>Chancellor.</i>
R. K. MOODY.....	<i>Secretary, Treasurer, and Purchasing Agent.</i>
E. F. ENGEL*.....	<i>Registrar.</i>
C. H. GOODRICH.....	<i>General Agent for University Lands.</i>
T. C. WHITE.....	<i>Superintendent of Buildings and Grounds.</i>

*Absent on leave from October to June. His place has been filled by Mr. George O. Foster.

THE BOARD OF INSTRUCTION.

NOTE.—The names of the members of the Faculties are arranged in five classes—Professors, Associate Professors, Assistant Professors, Instructors, and Lecturers; and the place of each in its own class is determined by seniority of appointment.

FRANCIS HUNTINGTON SNOW, PH. D. (*Williams*), LL. D. (*Princeton*),
PRESIDENT,

Professor of Botany and Entomology, and Director of the Museum
of Natural History.

EPHRAIM MILLER, PH. D. (*Allegheny*),
Dean of School of Arts; and Professor of Mathematics and Astronomy.

JAMES WOODS GREEN, A. M. (*Williams*),
Dean of School of Law; and Professor of Constitutional Law, Contracts, Commercial Paper, Insurance, and Corporations.

WILLIAM HERBERT CARRUTH, A. M. (*Kansas University*), PH. D. (*Harvard*), Professor of German Language and Literature.

FRANK OLIN MARVIN, A. M. (*Allegheny*),
Dean of School of Engineering; and Professor of Civil Engineering.

EDGAR HENRY SUMMERFIELD BAILEY, PH. B. (*Yale*), PH. D. (*Illinois Wesleyan*), Professor of Chemistry and Metallurgy.

JAMES WILLIS GLEED, A. M. (*Kansas University*),
Professor of Law of Real Property.

ALEXANDER MARTIN WILCOX, PH. D. (*Yale*),
Professor of Greek Language and Literature.

LUCIUS ELMER SAYRE, PH. M. (*Philadelphia*), B. S. (*Michigan University*),
Dean of School of Pharmacy; and Professor of Pharmacy.

ARTHUR GRAVES CANFIELD, A. M. (*Williams*),
Professor of French Language and Literature.

LUCIEN IRA BLAKE, PH. D. (*Berlin*),
Professor of Physics and Electrical Engineering.

LEWIS LINDSAY DYCHE, A. M., M. S. (*Kansas University*),
Professor of Zoology, Taxidermist, and Curator of Mammals and Birds.

FRANK WILSON BLACKMAR, PH. D. (*Johns Hopkins*),
Professor of History and Sociology.

CHARLES GRAHAM DUNLAP, A. B. (*Ohio Wesleyan*), LITT. D. (*Princeton*),
Professor of English Literature.

GEORGE BARLOW PENNY, B. S. (*Cornell*),
Dean of School of Fine Arts; and Professor of Harmony, Musical Composition,
and Organ.

SAMUEL WENDELL WILLISTON, A. M. (*Kansas Agricultural College*),
M. D., PH. D. (*Yale*),
Professor of Historical Geology, Vertebrate Anatomy, and Physiology.

CARL ADOLPH PREYER (*Vienna*),
Professor of Piano, Counterpoint, Canon, and Fugue.

OLIN TEMPLIN, A. M., M. S. (*Kansas University*),
Professor of Philosophy.

FRANK HEYWOOD HODDER, PH. M. (*Michigan University*),
Professor of American History and Administration.

EDWIN MORTIMER HOPKINS, PH. D. (*Princeton*),
Professor of Rhetoric and English Language.

JOSEPH AUGUSTUS FARRELL (*Leipsic and Florence*),
Professor of Voice Culture, Singing, and Violin.

ALFRED HOUGHTON CLARK (*Boston Museum of Fine Arts*),
Professor of Drawing and Painting.

ERASMUS HAWORTH, M. S. (*Kansas University*), PH. D. (*Johns Hopkins*),
Professor of Physical Geology and Mineralogy.

ARTHUR TAPPAN WALKER, A. M. (*Vanderbilt*),
Professor of Latin Language and Literature.

HENRY BYRON NEWSON, PH. D. (*Ohio Wesleyan*),
Associate Professor of Mathematics.

WILLIAM CHASE STEVENS, M. S. (*Kansas University*),
Associate Professor of Botany.

EPHRAIM DOUGLASS ADAMS, PH. D. (*Michigan University*),
Associate Professor of History and Sociology.

ARVIN SOLOMON OLIN, A. B. (*Ottawa*), A. M. (*Kansas University*),
Associate Professor of Pedagogy.

REV. HECTOR W. COWAN, A. M. (*Princeton*),
Associate Professor of Physical Training, and Chapel Director.

EDWARD CURTIS FRANKLIN, M. S. (*Kansas University*), PH. D. (*Johns Hopkins*),
Associate Professor of Chemistry.

WILLIAM BALDWIN BROWNELL, A. B. (*Hamilton*), LL. B. (*Kansas University*),
Associate Professor of Criminal Law, Domestic Relations, Partnerships, Sales, Agency, and Bailments.

MILES WILSON STERLING, A. M. (*Kansas University*),
Assistant Professor of Greek.

EDWARD CHARLES MURPHY, M. S., C. E. (*Cornell*),
Assistant Professor of Civil Engineering.

FRANK E. WARD,
Assistant Professor of Electrical Engineering Shop Work.

HANNAH OLIVER, A. M. (*Kansas University*),
Assistant Professor of Latin.

H. FOSTER JONES, A. B. (*Amherst*),
Assistant Professor of English.

ELMER FRANKLIN ENGEL,* A. B. (*Kansas University*),
Assistant Professor of German, and Registrar.

EUGÉNIE GALLOO, B. L. (*Michigan University and University of France*),
A. M. (*Kansas University*),
Assistant Professor of French and Spanish.

ARTHUR ST. CHARLES DUNSTAN, C. E. (*Alabama Polytechnic Institute*),
Assistant Professor of Physics and Electrical Engineering.

MARTIN EVERETT RICE, M. S. (*Kansas University*),
Assistant Professor of Physics and Mathematics.

MARSHALL ALBERT BARBER, A. B. (*Kansas University*), A. M. (*Harvard*),
Assistant Professor of Botany.

MARY MARCHANT PIERCE-CLARK (*Hemenway Gymnasium, Harvard University*),
Assistant Professor of Elocution and Oratory, and Physical Training.

GEORGE WAGNER, PH. C. (*Michigan University*),
Assistant Professor of Pharmacy.

*Absent on leave. His position is temporarily filled by FLORENCE EMMA PARROTT, A. B. (*Kansas University*).

RALPH CURTIS GOWELL,* A. B. (*Kansas University*),
Assistant Professor of Zoology.

RAPHAEL DORMAN O'LEARY, A. B. (*Kansas University and Harvard*),
Assistant Professor of English.

EFFIE SCOTT FRANKLIN, A. B. (*Kansas University*),
Assistant Professor of French and German.

SAMUEL JOHN HUNTER, A. M. (*Kansas University*),
Assistant Professor of Entomology.

WALTER KEIFER PALMER, M. E. (*Ohio State University*),
Assistant Professor of Graphics.

CLARENCE ERWIN MCCLUNG, A. B., PH. G. (*Kansas University*),
Assistant Professor of Zoology.

HUGO KAHL (*Uppsala University*),
Systematic Entomologist, and Curator of Entomological Collections.

E. GENEVE LICHTENWALTER, MUS. B. (*Kansas University*),
Instructor in Piano.

EDWARD BARTOW, A. B. (*Williams*), PH. D. (*Gottingen*),
Instructor in Chemistry.

ALFRED WASHBURN BENSON,
Lecturer on Pleading and Practice.

SAMUEL AGNEW RIGGS, A. M. (*Washington and Jefferson*),
Lecturer on Torts and Law of Railways.

D. M. VALENTINE, ex-Justice of the Supreme Court,
Lecturer on Wills and Successions, including Probate Practice.

C. L. DOBSON, ex-Judge of the Circuit Court of Missouri,
Lecturer on Corporations.

DAVID MARTIN, ex-Chief Justice of Supreme Court of Kansas.
Lecturer on Evidence.

RALPH R. PRICE (*Kansas University*),
Student Instructor in European History.

CARRIE M. WATSON, A. B. (*Kansas University*),
Librarian.

*Deceased, November 12, 1897.

ORATIONS AND ADDRESSES.

1897.

BACCALAUREATE SERMON.

WOLCOTT CALKINS, D. D.

ALUMNI ORATION.

EDWARD G. SMITH, A. B.

COMMENCEMENT ADDRESS.

WASHINGTON GLADDEN, D. D.

PHI BETTA KAPPA ADDRESS.

OLIN TEMPLIN, A. M.

ANNUAL ADDRESS AT THE OPENING OF THE UNIVERSITY YEAR.

WILLIAM A. WHITE.

THE UNIVERSITY.

The University of Kansas is as much an integral part of the public-school system of the state as is the high school or any of the grammar grades. The University is at the head of this system, and at this institution every attendant upon the lower grades is privileged some day to complete his education. Adhering strictly to the public-school-system idea, the courses of study of the majority of the high schools of the state are arranged in accordance with a plan of preparatory studies prescribed by the University. Students who complete this course of preparatory study are admitted to the University without examination. Men and women stand upon an equal footing, and students of either sex are admitted to all the privileges of the University without charge for tuition. The University now comprises the School of Arts, the School of Law, the School of Fine Arts, the School of Pharmacy, the School of Engineering, and the Graduate School.

MATERIAL EQUIPMENT OF THE UNIVERSITY.

BUILDINGS.

North College.—This structure was the first building to be erected. It was completed in 1866, from which time until 1872 the entire work of the University was carried on within its walls. In 1872 the main building was completed, and North College was for a time closed. In 1890 it was again opened, and, until the end of the school year 1893-'94, was used by the School of Law. North College is fifty feet square, three stories high, and contains eighteen rooms.

Fraser Hall (formerly called Main Building).—This building was erected in 1872, to better accommodate the growing school and to relieve the crowded rooms of North College. It is 246 feet in extreme length, ninety-eight feet wide in center, wings sixty-two feet each. There are fifty-four rooms in this building, of which one, the main audience room, containing the new electric pipe-organ, is ninety-four feet long and fifty-six feet wide. This room has a seating capacity of 1200. There are also in Fraser Hall eighteen lecture rooms, each large enough to accommodate classes of seventy-five to eighty students. In this building are located the offices of the University, including the Chancellor's office, the office of the Secretary and Treasurer, and the office of the Registrar. The north half of the first floor is devoted to the use of the School of Law, including the

law library. In the basement laboratories have been fitted up to relieve the overcrowded condition of the chemistry building.

The Chemistry Building is a structure in the form of a T, the main part extending east and west, being eighty by thirty-five feet, and the L north of this forty feet square. The east wing of the main structure is occupied as a lecture room capable of seating seventy-five students. The School of Pharmacy occupies the lower half of

Special Announcement.

The Electrical Engineering Shops and boiler house were destroyed by fire on March 22. The equipment was completely wrecked. Mr. George A. Fowler, of Kansas City, Mo., has donated \$18,000 for the erection of an independent building for the Electrical Engineering Shops, and public-spirited citizens of Kansas have loaned, for immediate use, \$30,000 for the equipment of the new building and the restoration of the old building, which will be hereafter devoted exclusively to the steam-heating plant. The new Electrical Engineering Shops, which will bear the name of the donor, will be modern in every respect; will contain boiler- and engine-rooms, arranged and adapted for complete boiler and engine tests, forge and foundry rooms, metal- and wood-working departments, dynamo-testing rooms, all fitted with latest types of appropriate machines, so distributed as to give the most comprehensive and exact technical instruction.

This shop building will contain, also, ample rooms for the testing of materials, and the cement and hydraulic laboratories of the department of Civil Engineering.

It is believed that this building and its equipment will be unsurpassed, in the carrying out of their purposes, by those of any technical school in the West. The building will be of stone, two stories in height, covering over 11,000 square feet of ground surface.

It is proposed to have the building ready for occupancy at the beginning of the academic year 1898-'99.

ably arranged and lighted. In the newspaper room are kept the county and city weeklies and dailies published within the state. In addition, dailies published in all the larger cities of the United States are kept on file. The second floor of the building contains a hall suitable for smaller audiences than are accommodated in University Hall. In the basement are seminary rooms used for private study of students in the various departments. The fire-

THE UNIVERSITY.

ty-four feet long and fifty-six feet wide. This room has a seating capacity of 1200. There are also in Frazer Hall eighteen lecture rooms, each large enough to accommodate classes of seventy-five to eighty students. In this building are located the offices of the University, including the Chancellor's office, the office of the Secretary and Treasurer, and the office of the Registrar. The north half of the first floor is devoted to the use of the School of Law, including the

law library. In the basement laboratories have been fitted up to relieve the overcrowded condition of the chemistry building.

The Chemistry Building is a structure in the form of a T, the main part extending east and west, being eighty by thirty-five feet, and the L north of this forty feet square. The east wing of the main structure is occupied as a lecture room capable of seating seventy-five students. The School of Pharmacy occupies the lower half of the building.

Snow Hall of Natural History.—Snow Hall is 110 feet in length by 100 feet wide, is provided with ample basement almost entirely above ground, two stories, each sixteen feet in the clear, and an attic of twelve feet. The west half of the building is occupied by the museums of the geological and zoölogical departments. On the first floor of the east half is the lecture room, extending through the basement and first story, and arranged in amphitheater style. This room has accommodations for 200 students. On the second floor are the laboratories and collections of the departments of entomology and botany. The third floor is occupied by the department of zoölogy, and here also are the workrooms of the taxidermist. The first floor is given up to the department of geology and vertebrate anatomy. This building is furnished throughout with the best appliances for investigation and instruction in all branches of natural history, including fifty compound microscopes of the best manufacture.

Electrical-Engineering Shops and Engine House.—This building, 86x48 feet, contains a battery of six boilers, for steam heating and power, and also on the first floor two steam-engines, of 150 and 35 horse-power, respectively, for the machine shop, and several dynamo plants, used for instruction in electrical engineering. The second and third stories contain the machine shop for the students of the electrical-engineering course. The building has testing and power wires running to the physical laboratory, where the more delicate instruments are in use. The dynamo plants have capacity for lighting all the University buildings as well as the grounds.

Spooner Library.—This building was erected in 1894. It was built by means of the bequest of Wm. B. Spooner, of Boston. Its total cost was \$75,000. Its length is 112 feet and extreme width 50 feet. The building consists of two stories and a basement, the greater part of which is above ground. On the first or main floor are located the general reading room, a newspaper room, and the librarian's and cataloguer's offices. The reading room is admirably arranged and lighted. In the newspaper room are kept the county and city weeklies and dailies published within the state. In addition, dailies published in all the larger cities of the United States are kept on file. The second floor of the building contains a hall suitable for smaller audiences than are accommodated in University Hall. In the basement are seminary rooms used for private study of students in the various departments. The fire-

proof book stack, with a capacity of 100,000 volumes, is an integral part of the building, and yet it is so cut off as to render its contents absolutely secure. The book stack consists of five stories, each eight feet high. The entire inside work, including floors, supports, and shelves, is of iron. The entire building is lighted throughout by electricity. Its every appointment is modern and its facilities and usefulness unexcelled.

Physics and Electrical-Engineering Building.—This is of Chateau Renaissance style, three stories high, of Cleveland, Ohio, sandstone, and was completed September, 1895, at a cost of \$58,000. Besides a general lecture room seating 100 and two class rooms seating thirty each, and a departmental reading room and library, there are two general laboratory rooms covering 3200 square feet. Accessible to these, are supply, battery, workshop, balance and chemical rooms. There are also eight smaller rooms specially adapted for advanced physical research, each provided with water, gas and electricity, and each basement laboratory room has a stone pier to bed rock making it free from vibrations of the building. Heavy electrical currents are so numerous and so planned that, to almost any laboratory room, all electrical currents from the dynamo station may be delivered. A sixty-cell storage battery is continually charged for laboratory work. The building is constructed without iron below the third story to avoid magnetic disturbances. The general apparatus room contains now about \$24,000 worth of demonstration and laboratory instruments. The building is heated by the Sturtevant forced-draft system, regulated by electric thermostats in each room. The air is changed automatically every fifteen minutes and in the lecture room every ten minutes. The total amount of floor space for research purposes is 5690 square feet.

Music Hall.—A large rented building, conveniently located on Massachusetts street, is at present occupied by a part of the School of Fine Arts. It contains a large concert room and a number of smaller rooms used as lecture and practice rooms and studios.

APPARATUS OF INSTRUCTION.

The students in civil engineering are well provided with instruments for engineering operations in the field and the draughting room. This equipment consists of chains, tapes, compasses, engineers' transits of different forms, engineers' levels and leveling rod; aneroids; a transit, level of precision, and plane table, for geodetic surveying; rods, floats, and current meter, for measurement of the flow of streams; machine for testing the strength of cements; a 100,000-pound Olsen testing machine; models illustrative of problems in descriptive geometry; blue-printing apparatus; blue prints of bridge details and standard railway plans; photographs of bridges and pumping machinery.

In physics and electrical engineering, the equipment is added to by

annual appropriations. About \$24,000 has been thus far expended. Recently large additions for original and precise experimentation have been imported, and it is believed a strong undergraduate course in laboratory work can now be carried out and much advanced research presented. The most accurate instruments of well-known best makers, both of this country and abroad, are provided, and the facilities of the engineering shops have allowed much new and original apparatus to be designed and constructed. It is the aim to keep the demonstration and laboratory apparatus to the standard of the newest and best makes and to the needs of modern laboratory methods.

The department of chemistry is well supplied with apparatus and material for carrying on university instruction. Laboratories are equipped in the chemistry building for work in general chemistry and qualitative analysis, quantitative analysis, and assaying, while in the basement of the main building temporary accommodations have been supplied for classes in organic chemistry, quantitative analysis, water analysis, and gas analysis.

In astronomy, the apparatus is not extensive, but in lieu of an observatory it answers its purpose. There belong to this department, (1) a telescope with an object glass of six inches, manufactured by A. Clark & Sons, and costing \$1000; (2) a good sextant; (3) a new celestial globe of twenty inches diameter; (4) a large number of astronomical slides, representing the sun and sun spots, the moon, the planets, comets, nebulae, the constellations, variable and multiple stars, etc.

A good collection of plaster casts, models, photographs, plates, etc., has been made, as an aid to the study of the ancient and modern languages. Among these are plaster casts of some of the masterpieces of Greek and Roman sculpture. A model of the Acropolis, a model of the east pediment of the Zeus temple at Olympia, casts of the Theseus of the Parthenon, Venus of Melos, Hermes of Praxiteles, and the Augustus in military dress, may be specifically named.

In addition, this work and that in history, politics, sociology and pedagogy are furnished with maps, charts, illustrative apparatus, photographs, etc., very helpful to the student. To this apparatus of instruction additions are being constantly made.

MUSEUMS OF NATURAL HISTORY.

- F. H. SNOW, Director.
L. L. DYCHE, Curator of the Zoological Collections.
S. W. WILLISTON, Curator of the Paleontological Collections.
E. HAWORTH, Curator of the Mineralogical Collections.
W. C. STEVENS, Curator of the Herbarium.
S. J. HUNTER, Assistant in Entomology.
M. A. BARBER, Assistant in Cryptogamic Botany.
HUGO KAHL, Curator of the Entomological Collections.
C. E. MCCLUNG, Curator of Microscopical Preparation.
J. W. BEEDE, Student Assistant in Paleontology.
A. STEWART, Student Assistant in Paleontology.
C. D. BUNKER, Assistant in Zoological Museum.

The work in botany, entomology, zoölogy and geology is greatly aided by the illustrative opportunities afforded by the cabinet collections, which contain upwards of 200,000 specimens. These collections have been chiefly obtained during the past twenty years by University exploring parties in western Kansas, Colorado, New Mexico, British America, Alaska, and Greenland. By means of the material thus accumulated a system of exchange has been established with leading institutions and naturalists in all parts of the United States, so that the cabinets contain a very satisfactory representation of the plants, insects, mammals, birds, minerals, and fossils, not only of the state of Kansas, but also the whole of North America.

The herbarium includes upwards of 5000 species of plants, permanently protected from destruction by vermin, and systematically arranged for convenient examination by students and visitors. The method of arrangement is substantially the same as that adopted at Harvard University.

The entomological collection contains more than 15,000 species and 100,000 specimens, representing all the different orders of insects. The instruction in this department has special reference to the discrimination of the beneficial from the injurious species, and the extensive collections are of practical value to the agricultural and horticultural interests of the state as well as to the students of the University in the determination of the names and habits of our insect friends and foes.

The collection of large mammals indigenous to the North American continent is one of the most complete in the world. The specimens have been collected from various parts of the continent, including a good series from Greenland, and the Atlantic coast as far north as Cape Sabine, and another series from the Pacific coast as far north as the Aleutian islands. Many of the large animals have been mounted and placed on exhibition in the public museums.

There are thousands of specimens in the shape of skins, skeletons and skulls which are packed away in drawers and cases from the want of space for proper exhibition. Most of these are available for

students studying zoölogy and comparative anatomy, and are used by the professors to illustrate their various lectures.

The ornithological cabinets comprise upwards of 2500 specimens of birds, belonging to 500 different species. These specimens are carefully protected in moth-proof cases. A portion of them are unmounted skins, furnishing ample material for laboratory study when fresh specimens cannot be readily obtained.

A series of skeletons affords representative types for the study of osteology.

An alcoholic collection of marine radiates, mollusks and articulates from the Atlantic and Pacific coasts affords to the zoölogical student the means of investigating the anatomical structure of the leading forms in all the great "types" of the animal kingdom.

In the conchological cabinet are included nearly 1000 species of shells from all parts of the world.

The mineralogical and geological cabinets contain upwards of 100,000 specimens, chiefly from Kansas and the Rocky mountains.

The geological collection comprises an excellent series of typical paleozoic invertebrate fossils, especially those of the carboniferous of Kansas. The collection of mesozoic vertebrates is one of the most noteworthy in the world. The collection of carboniferous and cretaceous plants is conceded to be the largest in the world. Valuable additions are constantly being made to the collections.

THE LIBRARY.

CARRIE M. WATSON, Librarian.

HELEN BINNINGER SUTLIFF, Assistant.

MABEL CLARE ROGERS, Assistant.

CLARA SCIOTO GILLHAM, Assistant.

EDITH M. CLARKE, Assistant.

JOHN EDWARD MCPHERSON, Student Assistant.

WILFRED WITHINGTON, Student Assistant.

JOHN M. CLOYES, Student Assistant.

CLARENCE DAVIS, Attendant in Law Library.

MYRON DEVERE RAFTER, Attendant in Law Library.

The University library, with the exception of the law library, is in the Spooner library building, used solely for library purposes. The law library is in the main building, adjoining the lecture rooms used by the law department. The University library is open every day of the year, excepting Sundays and legal holidays. Library hours are 8 A. M. to 6 P. M.; Saturdays, 8 A. M. to 3 P. M.

The most liberal facilities for using the library are offered to all members of the University. All books, except reference books and books too rare to be easily replaced, may be taken from the library by the student for three weeks.

The library is supplied with a card catalogue, which greatly facilitates the use of the books. The general reading room is a large, cheerful, comfortable and well-equipped room, lighted by 200 electric

lamps, so that there is a perfect, evenly diffused light. Here may be found the general reference books, cyclopedias, dictionaries, card catalogue, and the more important journals and periodicals.

The library at present numbers 28,707 volumes, which are kept in the fire-proof stack room.

Several departments have seminary rooms in this building. Books upon the subjects under discussion in the class rooms are placed in these seminary rooms, where it is convenient for the students to use them.

An annual appropriation of \$4000 is devoted to the purchase of books. The books are selected with the greatest care, and the endeavor is made to furnish the students with the latest and best authorities in the various departments. While the library is not large, it is at all events sufficiently full to enable the student to prosecute research, and to furnish him substantial aid in his investigation.

THE SCHOOL OF ARTS.

FACULTY.

F. H. SNOW, *President*,
Botany and Entomology.

E. MILLER, *Dean*,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

F. O. MARVIN,
Civil Engineering.

E. H. S. BAILEY,
Chemistry and Metallurgy.

A. M. WILCOX,
Greek.

L. E. SAYRE,
Pharmacy.

A. G. CANFIELD,
French.

L. I. BLAKE,
Physics.

L. L. DYCHE,
Zoology.

F. W. BLACKMAR,
History and Sociology.

C. G. DUNLAP,
English Literature.

G. B. PENNY,

Voice Training, Harmony, Musical Composition, and
History of the Fine Arts.

S. W. WILLISTON,

Historical Geology and Paleontology.

OLIN TEMPLIN,

Philosophy.

F. H. HODDER,

American History and Administration.

E. M. HOPKINS,

English Language.

A. H. CLARK,

Drawing.

E. HAWORTH,

Physical Geology and Mineralogy.

A. T. WALKER,

Latin.

H. B. NEWSON,

Mathematics.

W. C. STEVENS,

Botany.

E. D. ADAMS,

History and Sociology.

A. S. OLIN,

Pedagogy.

REV. H. W. COWAN,

Physical Training.

E. C. FRANKLIN,

Chemistry.

M. W. STERLING, *Secretary*,

Assistant in Greek.

E. C. MURPHY,

Assistant in Civil Engineering.

HANNAH OLIVER,

Assistant in Latin.

H. FOSTER JONES,

Assistant in English.

E. F. ENGEL,

Assistant in German.

EUGÉNIE GALLOO,

Assistant in French and Spanish.

A. ST. C. DUNSTAN,

Assistant in Physics.

M. E. RICE,

Assistant in Physics and Mathematics.

M. A. BARBER,

Assistant in Botany.

MARY M. PIERCE-CLARK,*

Assistant in Elocution, and Physical Training.

GEORGE WAGNER,

Assistant in Pharmacy.

EDWARD BARTOW,

Instructor in Chemistry.

R. D. O'LEARY,

Assistant in English.

EFFIE SCOTT FRANKLIN,

Assistant in French and German.

S. J. HUNTER,

Assistant in Entomology.

FLORENCE E. PARROTT,

Assistant in French and German.

C. E. McCLUNG,

Assistant in Zoology.

*Mrs. M. M. P. Clark has resigned her position, to take effect at the end of the present academic year. Mr. Charles Vickrey (A. M. Kansas Normal College) has been elected to fill the vacancy.

COURSES OF INSTRUCTION.

ADMISSION.

Every person who applies for admission to the Freshman class in the School of Arts is required to be examined in the various subjects mentioned below, or to present a certificate from high school, academy, or college, as explained under "Admission by Certificate." An applicant may be admitted, although deficient in some of these requirements, provided such deficiency does not exceed two terms' work, but all deficiencies must be made good within one year from the time of admission.

REQUIREMENTS FOR ADMISSION.

1. *Physical Geography.*
2. *General History.* Myers, Sheldon, Barnes, or Fisher.
3. *Civil Government.* Thorpe and Hodder's Civil Government of the United States and of Kansas.
4. *Algebra*, through quadratic equations, radicals, and theory of exponents.
5. *Geometry.* Plane and solid.
6. *Physics.* Appleton's School Physics; Gage's Elements of Physics, Carhart and Chute's Elements of Physics, or equivalent.
7. In addition to the preceding, the candidate must offer one of the following groups.

- I. { English, three years.
Latin, three years.
- II. { English, one year.
Latin, three years,
and of either French, German, or Greek, two years.
- III. { English, two years.
Latin, three years.
Natural Science, one year, to be chosen from the following subjects: Botany, one-half year; *Zoology, one-half year; Chemistry, one-half year.

Beginning with the fall term of 1900, at which time group I will be discontinued, natural science, one year (in addition to physics), and two years of English will be required of all students who do not offer two foreign languages.

The "years" above referred to are explained below in detail:

*One-half of the term in zoology may be devoted to entomology, ornithology, animal anatomy, or some other special branch of zoology.

ENGLISH.

One Year. The applicant must have devoted the equivalent of two periods or recitations weekly to the study of classics, and three periods weekly to the study of English composition, and must have a satisfactory knowledge of descriptive grammar and of grammatical analysis. He will be required to submit a list of the classics read in preparation for entrance, specifying which were read in class and which as collateral reading, and to write an essay, in length not less than 200 words, upon a subject designated by the examiner and connected with some book on the list submitted. This essay will constitute the final test as to his work in composition. In literature, the essay will be supplemented by questions as to the subject-matter of the works he has critically studied in class, and their relation to the author and his time. In grammar, a knowledge of the leading facts will be required, and the applicant will be required to analyze sentences not presenting idiomatic difficulties, and to criticise ordinary examples of ungrammatical expression.

For the examination in 1898 the course recommended is as follows: For class study: Shakspeare, Macbeth; Burke, Speech on Conciliation with America; De Quincey, Flight of a Tartar Tribe; Tennyson, The Princess. For collateral home reading: Milton, Paradise Lost, books I and II; Pope's Iliad, books I and XXII; Addison, Sir Roger de Coverley Papers; Goldsmith, Vicar of Wakefield; Coleridge, Ancient Mariner; Southey, Life of Nelson; Carlyle, Essay on Burns; Lowell, Vision of Sir Launfal; Hawthorne, House of the Seven Gables. For this list may be substituted the following, with an equal amount of collateral home reading: Shakspeare, Merchant of Venice and Twelfth Night; Longfellow, Evangeline; Irving, Sketch Book; Scott, The Abbot.

The course recommended for 1899 is as follows: For class study: Shakspeare, Macbeth; Milton, Paradise Lost, books I and II; Burke, Speech on Conciliation with America; Carlyle, Essay on Burns. For collateral home reading and composition work: Dryden, Palamon and Arcite; Pope's Iliad, books I, VI, XXII, and XXIV; Addison, Sir Roger de Coverley Papers, in the Spectator; Goldsmith, Vicar of Wakefield; De Quincy, Flight of a Tartar Tribe; Cooper, Last of the Mohicans; Lowell, Vision of Sir Launfal; Hawthorne, House of the Seven Gables.

For 1900 the list is the same as that for 1899, except that for the selection from Carlyle is substituted Macaulay's Essays on Milton and Addison; and for that from Hawthorne, Scott's Ivanhoe and Tennyson's Princess. For 1901 and 1902 the list is the same as that for 1900, except that Paradise Lost gives place to Milton's L'Allegro, Il Penseroso, and Comus; and Dryden's Palamon and Arcite to George Eliot's Silas Marner.

Two Years. In addition to the preceding requirements for one year, the applicant must have given one additional year, five periods

weekly, to English classics and the history of English literature, language, and grammar; the greater part of the time to classics. In examination, he will be required to submit a list of about twenty classics critically studied in preparation for entrance, and to write a short essay upon a topic based upon some one of them and designated by the examiner. The examination proper will relate to details of style, subject-matter, purpose, and the historical relations of several of the classics read, to the general outline of English literary history to the eighteenth century, and to language and grammar, as specified below.

Three Years. The requirements for three years are, in addition to those already given, three periods weekly of composition for one year, and one period weekly of rhetoric. (See following diagram of the three courses.)

The examination in literature will be that specified in the two years' course. In rhetoric, the examination will relate to the elements of rhetorical theory, including the choice and use of words, the structure of sentences and paragraphs and of the complete discourse, including the making of outlines; and, in addition to the essay upon a literary topic, the applicant will be required to write another, narrative or descriptive, upon a subject based upon his own experience. In language, the examination will include the history of the English language, and in connection with it the important facts of grammatical history, especially such as have to do with the decay of inflections, with idioms, and with etymology.

The following diagram will make clear the nature and amount of the work required in English in each of the three courses, and it is recommended that the subjects in each course be arranged and distributed as shown on opposite page.

Text-books. The following text-books, or their equivalent, may be used as a basis for preparatory work: In elementary composition, Lewis's First Book in Writing English; in rhetoric, Genung's Outlines of Rhetoric; in literature, any convenient editions of the twenty required classics and Pancoast's Introduction to English Literature; in language history, Lounsbury's History of the English Language, part I; and in the history of English grammar, Lounsbury's History of the English Language, part II.

For a list of other text-books, teachers' helps, suggested courses of study in literature, and full explanations of the nature of the work required in each course, see the "Circular Touching the Requirements in English," published by the University, and the supplementary circular relating to the two years' course, and to more recently published helps and text-books.

Certificates. Certificates from accredited high schools, if accepted for any course in English, must show in detail that the required amount of time has been given to each subject by the applicant, and that he has completed the outlined work with satisfactory standing.

WORK REQUIRED IN ENGLISH.

STUDIES.	First Year.		Second Year.		Third Year.	
	First term.	Second term.	First term.	Second term.	First term.	Second term.
ONE-YEAR COURSE.	Composition	3 periods.				
	Classics.....	2 periods.				
TWO-YEAR COURSE.	Composition	2 periods.	1 period.	1 period.		
	Classics.....	3 periods.	2 periods.	1 period.		
	History of English Literature,	.....	.....	1 period.		
	History of English Language,	.....	2 periods.	2 periods.		
THREE-YEAR COURSE.	Composition	3 periods.	2 periods.	2 periods.	1 period.	1 period.
	Rhetoric .....	.....	1 period.	1 period.	2 periods.	1 period.
	Classics.....	2 periods.	2 periods.	2 periods.	.....	1 period.
	History of English Literature,	.....	.....	.....	2 periods.	.....
	History of English Language,	.....	.....	.....	.....	2 periods.

FRENCH.

First Year. The translation at sight of easy French prose, and the writing of simple French sentences; a thorough knowledge of the conjugation of verbs, regular and irregular; and familiarity with the elementary principles of syntax (as much as is contained, for example, in the first part of Whitney's or Otto's Grammar).

Second Year. Thorough acquaintance with French grammar

—ability to read readily at sight; knowledge of some period of French literature, based upon the reading of its representative works.

GERMAN.

First Year. Grammar (Otis). Thorough drill in the declension of nouns and adjectives, and in the conjugation of verbs, both regular and irregular; translation of simple English sentences into German. Reader (Brandt), 100 pages, with careful attention to points of grammar and syntax. Dictation of simple German prose.

Second Year. Reader (Brandt completed), Wilhelm Tell (Deering's text). Sight-reading (*Der Zerbrochene Krug*). Exercises in composition and dictation.

GREEK.

First Year. White's Beginners' Greek Book, Gleason and Atherton's First Greek Book, or Frost's Greek Primer, or an equivalent.

Second Year. Xenophon's Anabasis, two books, or their equivalent.

In place of the above two years' work, the candidate may offer: The translation at sight of simple Attic prose, with questions on the usual forms and ordinary construction.

LATIN.

First Year. Grammar and reader.

Second Year. Cæsar's Gallic War, four full books, or an acceptable equivalent, and two of Cicero's Orations; the translation into Latin of sentences founded upon Cæsar and Cicero.

Third Year. Four of Cicero's Orations, Vergil's Æneid, five books; the translation into Latin of sentences founded upon Cicero.

ADMISSION BY CERTIFICATE.

I. Students will be admitted into the Freshman class upon the certificate of the president, superintendent or principal of any college, academy, or other incorporated institution of learning, or of any public high school of the state, showing that such students have completed all the preparatory prescribed studies as laid down in the University catalogue.

II. Students who present certificates in accordance with the above regulations, showing that they have completed all the required preparatory studies except two terms' work, will be admitted with conditions, without examination. All entrance deficiencies must be made good within one year from the time of admission.

Candidates for admission who do not present certificates in accordance with the above regulations will be received into the University only on examination.

STATE HIGH SCHOOLS.

I. Names of high schools reporting courses which fully prepare for the Freshman class, School of Arts, are as follows :

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Abilene.....	J. H. Niesley.....	W. H. Wagner.
Alton Ill.....	R. A. Haight, A. M.....	J. E. Turner, A. M.
Argentine.....	A. P. Warrington.....	Margaret Rush, A. B.
Arkansas City.....	W. M. Fisher, A. M.....	W. M. Fisher, A. M.
Atchison.....	J. H. Glotfelter.....	C. A. Shively.
Atchison Co., Effingham..	J. W. Wilson, A. B.....	W. D. Ross, A. M.
Belleville.....	C. C. Canfield.....	Will McMurray, A. B.
Beloit.....	Harold Barnes, A. B.....	W. H. Andrews.
Blue Rapids.....	G. B. Buikstra, A. B.....	G. B. Buikstra, A. B.
Burlingame.....	C. S. Fowler.....	Roy Holtz.
Burlington.....	L. D. Ellis, A. B.....	L. D. Ellis, A. B.
Burrton.....	H. C. Campbell.....	H. C. Campbell.
Caldwell.....	I. E. Swain.....	Carrie Perry.
Caney.....	N. T. Adams.	
Carbondale.....	J. T. Albin, A. M.....	J. T. Albin, A. M.
Cawker City.....	L. J. Hall.....	L. J. Hall.
Centralia.....	Geo. C. Baker, A. B.....	Geo. C. Baker, A. B.
Chanute.....	H. C. Ford.....	Lottie Liggett.
Chetopa.....	M. Nellie McGinley.	
Clay Center.....	B. F. Merten, A. M.....	W. S. Heusner, A. B.
Coffeyville.....	Frank McClellan.....	A. M. Ragle.
Columbus.....	E. L. Enloe.....	O. C. Ecko.
Concordia.....	A. B. Carney.....	Ida R. Wilcox.
Cottonwood Falls.....		D. F. Shirk.
Council Grove.....	J. E. Edgerton, B. Ped.	
Delphos.....		T. H. Scheffer, A. B.
Dickinson Co., Chapman.	S. M. Cook, A. B.	
Dodge City.....	Warren Baker.....	H. A. Cord.
Downs.....	W. B. Flanders.....	W. B. Flanders.
Ellsworth.....	W. W. Harvey.....	Della M. Smoke, A. M.
Emporia.....	L. A. Lowther, A. M.....	J. D. Barnett, A. M.
Erie.....		E. L. Rosebush.
El Dorado.....	L. Tomlin.....	W. H. Greider.
Florence.....	E. C. Hickey, A. B.....	R. W. Smith.
Fort Scott.....	D. M. Bower.....	W. C. Lansdon.
Frankfort.....		T. P. Bogar.
Fredonia.....	J. R. Campbell.....	J. R. Thierstein, A. B.
Galena.....	T. B. Mosher.....	Mrs. Ella F. Myers.
Garden City.....	Roy S. Liggett.....	Helen M. Folsom.
Garnett.....	Homer S. Myers, A. M.....	C. H. Oman.
Glasco.....		Guy Bernard.
Girard.....	H. C. Ford.....	Mary Burd, A. B.
Great Bend.....	Ed. T. Barber.....	Alice A. Reynolds.
Gypsum City.....		J. C. Short, A. B.
Halstead.....	H. O. Kruse, A. B.....	Bennet Grove.
Harper.....	C. O. Fulton.	
Hartford.....		Alva Sweezey, A. B.
Hays City.....	Oscar A. Kropf, A. M.	
Hiawatha.....	E. O. Leatherwood.....	William Redmond, A. M.
Herington.....	W. W. Ramey.....	Clara Williams.
Holton.....	E. E. Heath, A. B.....	L. H. Dickerson.
Horton.....	J. E. Dyche, A. B.....	Henry Fiegenbaum, A. B.
Howard.....	C. W. Pratt.....	C. W. Pratt.
Humboldt.....	A. H. Newton.....	Ulrick Jarrett.

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Hutchinson	Geo. W. Winans	Mrs. E. H. Richardson, A. M.
Independence	S. M. Nees, B. S.	S. A. M. Young, A. B.
Iola	W. S. Picken.	
Junction City	G. W. Kendrick	G. L. Towne, A. B.
Kansas City	L. L. L. Hanks	Geo. E. Rose, A. B.
Kansas City, Mo.	J. M. Greenwood	E. C. White, A. M.
Kingman	Glen O'Brien	Mayme K. White.
Labette Co., Altamont.		T. B. Hanna.
La Cygne	W. A. Stacey, B. S.	W. A. Stacey, B. S.
Lakin		E. W. Kelley.
Lawrence	F. P. Smith, A. M.	F. H. Olney, A. B.
Leavenworth	Miss M. E. Dolphin.	W. A. Allen.
Lyndon	L. A. Park	L. A. Park.
Lyons	F. C. Jacoby, A. M.	Mary Schmalzried.
Mankato		F. L. Platt.
Marion	B. D. Van Ostrand, B. S. .	R. M. Williams.
Marysville	R. M. McKelvey	George Gorow.
McPherson	H. Winsor	Laura E. Humphrey.
Minneapolis	E. P. McMahon	G. W. Smith, B. S.
Moline	Richard Allen	Richard Allen.
Moran	E. W. Myler.	
Mound City	B. F. Ader	B. F. Ader.
Neodesha	R. T. Madden	C. A. Rohrer.
Newton	J. W. Cooper	D. R. Krehbiel, A. B.
Norton		H. M. Culter.
Oskaloosa	D. L. Stanley	D. L. Stanley.
Oklahoma City, O. T.	B. F. Nihart, A. B.	M. J. Patterson, B. S.
Olathe	S. W. McGarrah, A. M. .	H. P. Butcher, A. B.
Osage City	N. McDonald.	
Osawatomie	Hugh H. Ewing, B. S. ...	Sadie B. Mann, A. B.
Osborne	J. B. McClure	Theresa P. Comfort.
Ottawa	W. M. Sinclair	W. H. Olin, M. S.
Paola	E. A. Farrington, A. B. .	F. W. Allen, B. S.
Parsons	S. D. Frazier	Roxie E. Clark.
Peabody	A. H. Bushey	A. H. Bushey.
Pittsburg	R. S. Russ	W. R. Blair.
Phillipsburg	Treadwell C. Coffman, A. B.	
Pleasanton	W. N. Logan, A. M.	J. F. Hall, A. B.
Pratt	Grant Van Hoose	C. B. Taylor.
Quenemo	C. A. Deardorff	C. A. Deardorff.
Sabetha	I. B. Morgan	I. B. Morgan.
Salina	A. Ludlum	Mrs. M. A. Ludlum.
Sedan	D. A. Iliff.	
Sedgwick		E. L. Hillis.
Seneca	C. C. Starr, Ph. B., B. S. .	J. A. Cannan.
Solomon	S. S. Owen, A. B.	Carrie Matson.
St. Mary's	A. L. Bell	V. H. Biddison, A. M.
St. Francis		W. A. Bundy.
Stafford		J. M. Coleburn.
Sterling	S. M. Simmons, A. B.	W. C. McCroskey, A. B.
Stockton	C. E. Merwin.	
Sumner Co., Wellington. .		T. W. Butcher, A. B.
Thomas Co., Colby	W. G. Riste	W. G. Riste.
Thayer		W. A. Cook.
Topeka	W. M. Davidson	John L. Williams, Ph. B.
Troy	U. S. C. Busch.	
Valley Falls	J. M. Nation	J. W. Lakin.
Wamego	J. H. Sawtell, A. B.	Ada Pixley.

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Warrensburg, Mo.	L. W. Martin	L. W. Martin.
Washington	H. W. Charles	E. W. Enochs.
Wathena	G. W. Kirkwood.	
White Cloud		J. N. Banks, A. M.
Wichita	F. R. Dyer	F. R. Dyer.
Winfield	J. W. Spindler	S. C. Bloss, A. B.
Yates Center	A. H. Epperson	A. M. Kannard.

Total in list I, 119. •

ACADEMIES.

<i>Name of academy.</i>	<i>Location.</i>	<i>Principal.</i>
Arkansas City	Arkansas City	L. E. Eddy, M. S.
Friends'	Washington	A. W. Jones, A. M.
Hiawatha	Hiawatha	L. E. Tupper, A. M.
Kansas Christian College, Lincoln		O. B. Whitaker, M. S., A. M.
Lewis	Wichita	J. M. Naylor, Ph. D.
Lowell		{ C. E. Cosand, B. L. Hettie Hunt, A. B. }
Southern Kansas	Winfield	Thaddeus H. Rhodes.
Tonganoxie	Tonganoxie	Irving King, A. B.
Wentworth Milit'y	Lexington, Mo.	Sandford Sellers, A. M.

Academies in list I, 9.

II. Names of high schools reporting courses which fall short of preparing for the Freshman class, School of Arts, by not more than the amount of two terms' work, are as follows:

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Alma	H. W. Jones, B. S.	H. W. Jones, B. S.
Attica		C. H. Ewing.
Augusta		W. J. Speer, B. S.
Cherry Vale	E. A. Herod	W. W. Wood.
Clyde	S. V. Mallory	May Carpenter, A. M.
Enterprise	H. M. Ambrose, A. M.	H. M. Ambrose, A. M.
Eureka	G. A. Bower	Jessie Brookover.
Lincoln	Chas. S. Caldwell	Chas. S. Caldwell.
Mound Valley		S. L. Fogleman.
Oswego	C. H. Williams	Cora B. Hazlett.
Russell		R. F. Malaby.
Smith Center		J. N. Mosher.
Waterville		J. H. Naff.
Waverly	C. W. Thompson	Agnes Graham.
Wellsville		Francis A. Prather.

Total in list II, 15.

SPECIAL STUDENTS.

Persons of mature years (at least twenty-one years of age) and character, who desire for reasons satisfactory to the Chancellor or Faculty to pursue some special line of study, without becoming candidates for a degree, are allowed to enter as special students. Such students must file with the Registrar of the University, prior to entering classes, a statement of the work which they desire to pursue, and a written statement from the instructors under whom work is to be carried that the student is prepared to undertake the work specified. With the advice and consent of the Faculty, special students may carry other studies than that in which they are specializing, provided

such studies are closely connected with their special work and necessary to it.

Special students are subject to the same regulations as regular students with regard to the quality of work performed, and attendance at recitations and examinations, but not as to the number of studies to be pursued. The Faculty may at any time deprive any special student of his privileges if it appears that he is abusing or neglecting them.

REGISTRATION.

All candidates for admission to the Freshman class having high-school certificates, and all students of the University intending to pursue their studies in the ensuing year, must present themselves for registration at the University on Wednesday and Thursday, September 7 and 8, 1898. Registration at a later date will be permitted only on the presentation of a satisfactory reason for the delay.

TIMES AND PLACES OF EXAMINATION.

Candidates for the Freshman class not presenting the required certificates will be examined at the University, Lawrence, either on Thursday, Friday, and Saturday, June 9, 10, and 11, 1898, or on Wednesday, Thursday, and Friday, September 7, 8, and 9, 1898. Candidates will be examined at other times only on giving to the Registrar a satisfactory reason for non-attendance at the appointed examinations. The following is the schedule of examinations in June and September:

THURSDAY, JUNE 9, OR WEDNESDAY, SEPTEMBER 7.

- 9-10. English.
- 10-11. Algebra.
- 11-12. French.
- 12-1. Physical Geography.
- 2-3. German.
- 3-4. Civil Government.

FRIDAY, JUNE 10, OR THURSDAY, SEPTEMBER 8.

- 9-10. Geometry.
- 10-11. Latin.
- 11-12. Outlines of History.
- 2-3. Greek.
- 3-4. Physics.

SATURDAY, JUNE 11, OR FRIDAY, SEPTEMBER 9.

- 8-9. Botany.
- 9-10. Chemistry.
- 12-1. Zoology.

Candidates for admission may divide the examination between two years, or between June and September of the same year, under the following conditions: The applicant may present himself at the

preliminary for examination in any or all of the prescribed subjects, and if he is successful in five or more subjects, he need not be again examined in them.

ADMISSION TO ADVANCED STANDING.

I. *By Examination.* A candidate may be admitted to the Sophomore, Junior, or Senior class, if he appear on examination to be prepared in the following studies: (1) In the studies required for admission to the Freshman class. (2) In all prescribed studies already pursued by each class for which he offers himself; and in as many optional studies as he would have pursued if he had entered at the beginning of the course.

II. *Without Complete Examination.* Graduates or students from the higher classes of other colleges may be admitted to advanced standing upon the presentation of a certificate stating in detail the work done, under such conditions as the Faculty may determine to be just in each case, upon consideration of the applicant's previous course of study, and of the evidence he presents of his proficiency in that course. For information on this subject, application should be made to the Registrar of the University.

Undergraduates from other colleges must present certificates of honorable dismissal, or other satisfactory evidence of good character.

It is required of all candidates for the first degree that the last year be spent in residence at the University.

Course of Study Leading to the Degree of Bachelor of Arts.

The following is an outline of the studies prescribed for the degree of bachelor of arts. These studies are described more in detail in the account of courses offered by the several departments. The Roman numerals below correspond to the numerals used in the detailed account of courses.

FRESHMAN YEAR—FIRST TERM.

Group A: English *B* I; French II, III, V; German I, III, V
Greek I, III, V; Latin I, III.

Group B: Mathematics I (Algebra and Plane Trigonometry).

Group C: Elocution or Voice Training, once a week.

Hygiene, once a week.

Physical Training, once a week.

Every Freshman is required to carry two courses in A, and all of B and C.

Students offering three years of English for entrance will not take English *B* I, but must substitute a second course from A, or English history from Sophomore B.

Students entering with only one or two years of English who have not satisfied the department of English of their ability to write good English are required to take English *B* I.

FRESHMAN YEAR—SECOND TERM.

Group A: French II, IV, VI; German II, IV, VI; Greek II, IV, VI; Latin II, IV.

Group B: English *A* I.

Botany I.

Chemistry I.

Mathematics II (Spherical Trigonometry and Theory of Equations).

Group C: Elocution or Voice Training, once a week.

Physical Training, three times a week.

Every Freshman is required to carry one course in A and all of C. An option of any two courses in B is permitted to all students; provided, first, that English *A* I may be elected by those students only who offer one year of English for entrance; and second, that students offering botany and chemistry for entrance will take a second course from Freshman A or Sophomore B.

SOPHOMORE YEAR — FIRST TERM.

- Group A:* French I, III, V; German I, III, V; Greek I, III, V;
Latin I, III.
- Group B:* Mathematics III (Analytics).
English History.
Zoölogy.
Chemistry II.
Botany II.
- Group C:* Physical Training, three times a week.
Three themes of 1000 words each.

SOPHOMORE YEAR — SECOND TERM.

- Group A:* English A II; French II, IV, VI; German II, IV, VI;
Greek II, IV, VI; Latin II, IV.
- Group B:* Mathematics IV (Calculus).
Logic and Psychology.
Surveying.
Botany I, when not taken in Freshman year.
Chemistry I, when not taken in Freshman year.
Mathematics II, when not taken in Freshman year.
- Group C:* Physical Training, three times a week.
Three themes of 1000 words each.

Every Sophomore will take all of C and will elect any six courses from A and B; provided, that not more than four courses shall be from either group.

At the end of the Sophomore year, every student must have done some work in the school in at least two languages other than English.

By the end of the Sophomore year, every student must have done, either in the preparatory schools or in the University, at least one year's work in the biological sciences and one-half year's work in chemistry.

JUNIOR AND SENIOR YEARS.

Each Junior and Senior is required to write two forensics, or equivalent theses, each term, in addition to which he must pursue in each term three full studies, or their equivalent, chosen by himself from the list of optional studies, in accordance with the following regulations:

In his Junior or Senior years the student shall be free in his choice of optional studies, but may not take more than four terms' work in one department or under one instructor. The following are the departments in which optional studies are offered:

1. Botany and Entomology.
2. Zoölogy and Anatomy.
3. Historical Geology and Physiology.

4. Physical Geology, Mineralogy, and Petrography.
 5. Chemistry and Metallurgy.
 6. Civil Engineering.
 7. Physics.
 8. Mathematics and Astronomy.
 9. Philosophy.
 10. Sociology and Political Economy.
 11. European History.
 12. American History and Administration.
 13. Greek.
 14. Latin.
 15. German.
 16. French.
 17. English.
 18. Pharmacy.
 19. Pedagogy.
 20. Music.
 21. Spanish.
 22. Organic Evolution.
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LIST OF COURSES.

NOTE.—(a) means that the study occupies the first half term, (b) the last half term. Unless otherwise stated, all courses are open to Juniors and Seniors.

1¹—Botany.

I. ELEMENTARY STRUCTURAL BOTANY. Laboratory work 10 hours per week and lectures. Field exercises. 2d term. Every day, 10 to 12. *Freshman and Sophomore alternative*. Professor Stevens and Mr. Barber.

II. HISTOLOGICAL BOTANY. Laboratory work 10 hours per week and lectures. 1st term. Every day, 8 to 10 and 10 to 12. *Sophomore alternative*. Professor Stevens.

III. CRYPTOGAMIC BOTANY. Laboratory work 10 hours per week and lectures. 1st term. Every day, 1 to 3. Open to students who have taken course I. Mr. Barber.

IV. PHYSIOLOGICAL BOTANY. Laboratory work 10 hours per week and lectures. 2d term. Every day, 8 to 10. Open to students who have taken courses I and III. Professor Stevens.

V. ADVANCED BOTANY. Special laboratory course. Ten weeks, 10 hours a week, by appointment. Open to students who have taken courses I and II. Mr. Barber or Professor Stevens.

VI. BACTERIOLOGY. 2d term (b). 8 to 10. Mr. Barber.

VII. VEGETABLE CYTOLOGY. Throughout the year. By appointment. Professor Stevens.

1²—Entomology.

I. INTRODUCTORY LABORATORY COURSE IN ANATOMY. 1st term. Every day, 10 to 12. Mr. Hunter.

II. ECONOMIC ENTOMOLOGY. Open to students who have completed course I. 1st term. Every day, 1 to 3. Mr. Hunter.

III. A STUDY OF THE KANSAS FAUNA. Laboratory and field work. Open to students who have completed course I. 2d term. Every day, 3 to 5. Mr. Hunter.

IV. GENERAL COURSE. Lectures, laboratory work, field exercises, study and observations of life-histories. This course is adapted to those who expect to teach entomology in high schools. 2d term. Every day, 1 to 3. Mr. Hunter.

V. SPECIAL LABORATORY COURSE. Thesis work in anatomy, classification, or life-histories. Ten hours a week, by appointment, for entire year. Course V must be preceded by courses I and II, or III. Mr. Hunter.

2.—Zoölogy and Anatomy.

I. ELEMENTARY ZOÖLOGY. Lectures and laboratory work. 1st term. Every day, from 1 to 3. *Sophomore alternative*. Packard's Zoölogy, advanced course, and Marshall and Hurst's Practical Zoölogy. Professor Dyche.

II. SYSTEMATIC AND DESCRIPTIVE ZOÖLOGY. Lectures and laboratory work. 2d term. Every day, from 3 to 5. A Manual of North American Birds, by Rob't Ridgway; Key to North American Birds, by Elliott Coues; Jordan's Manual of Vertebrates; The Fishes of North and Middle America, by Jordan and Everman. Professor Dyche.

III. MORPHOLOGICAL ZOÖLOGY. The comparative study of types. Lectures and laboratory work. 2d term. Every day, from 1 to 3. Brook's Invertebrate Zoölogy; Packard's Zoölogy; Marshall and Hurst's Practical Zoölogy. Professor Dyche.

IV. HISTOLOGY, OR MICROSCOPIC ANATOMY. Lectures and laboratory work. 2d term. Every day, from 3 to 5. Open to students who have taken course I, or comparative anatomy, course III. Piersol's Normal Histology. Mr. McClung.

V. CYTOLOGY, OR CELLULAR BIOLOGY. Lectures and laboratory work. 2d term. By appointment. Open to students who have taken course IV. Mr. McClung.

3.—Historical Geology, Vertebrate Anatomy and Physiology.

I. HISTORICAL GEOLOGY. Lectures. Scott's Geology. 2d term (b). Every day, at 2. Must be preceded by zoölogy I, or its equivalent. Professor Williston.

II. PALEONTOLOGY. Lectures and laboratory work. Nicholson and Lydekker, Zittel's Handbook. 2d term. Every day, at 3. Must be preceded by course I, or its equivalent. Professor Williston.

III. COMPARATIVE ANATOMY OF VERTEBRATES. Laboratory work. 1st term. Every day, at 3. Professor Williston.

IV. PHYSIOLOGY. Lectures and recitations. 1st term. Every day, at 2. Martin's Human Body. Professor Williston.

V. SPECIAL WORK IN VERTEBRATE ANATOMY—recent or fossil. Must be preceded by course I. At option of instructor. Professor Williston.

VI. FIELD WORK IN PALEONTOLOGY. For advanced students only. Such work, if sufficiently meritorious, will be credited as equal to one study pursued in the University for double the length of time spent in the field. Professor Williston.

4.—Physical Geology, Mineralogy, and Petrography.

I. ELEMENTS OF MINERALOGY AND PETROGRAPHY. Daily lectures and laboratory work. An elementary course, including crystallography, blowpipe analysis, and the study of building stone. 1st term. Every day, 9 to 11. Professor Haworth.

II. SYSTEMATIC MINERALOGY. Daily lectures and laboratory work. To follow I. 2d term (*a*). Every day, at 10. Professor Haworth.

III. ELEMENTARY PETROGRAPHY. Daily lectures and laboratory work. To follow I, and may follow II, or be taken as a parallel study. 2d term (*a*). Every day, at 11. Professor Haworth.

IV. ELEMENTS OF PHYSICAL GEOLOGY. Daily lectures. An elementary course preliminary to elements of historical geology. 2d term (*a*). Every day, at 2. Professor Haworth.

V. ECONOMIC GEOLOGY. Daily lectures. Must be preceded by I or IV, or an equivalent. 1st term (*a*). Every day, at 3. Professor Haworth.

VI. ELEMENTARY MINERALOGY. Briefer course. Daily lectures and laboratory work. A study of elementary crystallography, and of the more important ores. Required of pharmacy Seniors. 2d term (*a*). 3 to 5. Professor Haworth.

Field work in geology and mineralogy, as described under graduate courses, may be begun by undergraduate students who are sufficiently advanced. It is desirable that students working in this group elect a portion of the work offered by the department of historical geology and anatomy, or the ten-weeks' course in assaying given by the department of chemistry.

5.—Chemistry.

Pharmacy and Preparatory Medical Studies.

I. CHEMISTRY. A study of chemical elements and their compounds. Remsen's Briefer Course in Chemistry. Experimental lectures and recitations. Laboratory work three afternoons each week, from 1 to 3. Required of Junior pharmacy and preparatory medical students. 1st term, at 3. Professor Franklin.

II. QUALITATIVE ANALYSIS. Lectures once a week; laboratory work daily. Bailey's Laboratory Guide to the Study of Qualitative Analysis. 2d term (a), from 1 to 4. Mr. Bartow.

III. PHARMACEUTICAL QUANTITATIVE ANALYSIS. Talbot's Quantitative Analysis. Laboratory work daily; lectures once a week. 1st term (a). Mr. Bartow.

Freshman and Sophomore Studies.

IV. CHEMISTRY. A study of chemical elements and their compounds. Remsen's Briefer Course in Chemistry. Experimental lectures and recitations. Laboratory work one afternoon each week, from 1 to 3. Required either in Freshman or Sophomore year of all students who do not offer chemistry for admission. 2d term, at 8 or 10. Professor Bailey and Mr. Bartow.

V. QUALITATIVE ANALYSIS. Lectures and laboratory work daily. Bailey's Laboratory Guide to the Study of Qualitative Analysis. 1st term, from 9 to 11, or from 1 to 3. Freshman and Sophomore alternative. Professor Bailey and Mr. Bartow. This course must be preceded by chemistry IV.

Junior and Senior Optionals.

VI. QUANTITATIVE ANALYSIS. Fresenius's or Talbot's Quantitative Analysis. Laboratory work 10 hours a week for two consecutive hours daily, either forenoon or afternoon. 1st or 2d term. Professor Bailey, Professor Franklin, and Mr. Bartow. This course must be preceded by chemistry IV and V.

VII. QUANTITATIVE ANALYSIS. Same as course VI. 1st or 2d term. The latter half of this term may be devoted to some special topic, as water analysis, iron analysis, sugar analysis, or assaying. Professor Bailey, Professor Franklin, and Mr. Bartow. This course must be preceded by chemistry IV, V, and VI.

VIII. INORGANIC CHEMISTRY. An advanced course in general chemistry will be given during the first half term. The second half will be devoted to elementary physical chemistry. Required of Senior electrical engineers. 1st term, daily, at 8. Mr. Bartow, first half. Professor Franklin, second half. This course must be preceded by chemistry IV and V.

IX. ORGANIC CHEMISTRY. Remsen's Organic Chemistry and Orndorff's Manual. Lectures Monday, Wednesday, and Friday.

Laboratory work Tuesday and Thursday, at 1. 2d term. Professor Franklin. This course must be preceded by chemistry IV and V.

X. TOXICOLOGY. Lectures and recitations. Every day, at 11. Required of students in the preparatory medical course and of Senior pharmacists. 1st term (*b*). Professor Bailey. This course must be preceded by chemistry I or IV.

XI. ASSAYING. Brown's Assaying. Laboratory work 10 hours per week. Daily, from 3 to 5. 2d term (*b*). Professor Franklin. This course must be preceded by chemistry IV, V, and VI, the first half of VII, and mineralogy I.

XII. ORGANIC PREPARATIONS. Laboratory work in Organic Chemistry. 1st or 2d term. Ten hours per week, at the convenience of the instructor. Mr. Bartow. This course must be preceded by chemistry IV, V, and IX.

XIII. SANITARY AND APPLIED CHEMISTRY. The study of air, potable waters, fuels, ventilation, lighting, disinfectants, foods and their adulteration, methods for cooking and preparing food products, chemical processes of digestion, etc. Lectures and laboratory demonstrations. 2d term. Every day, at 11. Professor Bailey. This course must be preceded by chemistry IV.

XIV. THE CHEMISTRY OF SUGAR MANUFACTURE. Laboratory work. Every day, at the convenience of the instructor. 2d term (*b*). Professor Franklin. This course must be preceded by chemistry IV, V, VI, and the first half of VII.

XV. WATER ANALYSIS. Laboratory work 10 hours a week, by appointment. 1st or 2d term. Mr. Bartow. This course must be preceded by chemistry IV, V, and VI.

XVI. INTRODUCTORY PHYSICAL CHEMISTRY. A laboratory course in the study of the vapor density, freezing and boiling point, molecular weight determinations, and of the conductivity of electrolytic solutions. At the convenience of the instructor. 2d term. Professor Franklin.

6.—Civil Engineering.

I. ANALYTICAL MECHANICS. 1st term. Every day, at 11. Mr. Murphy.

II. RESISTANCE OF MATERIALS. 2d term. Every day, at 10. Mr. Murphy.

III. MECHANICS OF FLUIDS. 1st term (*a*). Every day, at 10. Mr. Murphy.

IV. ROOFS AND BRIDGES. 1st term. Every day, from 1 to 3. Professor Marvin.

V. ENGINEERING DESIGN. 2d term. Every day, from 1 to 3. Professor Marvin.

VI. SURVEYING. *Sophomore alternative*. 2d term. Every day, at 10. Professor Marvin.

VII. FIELD ENGINEERING. 1st term. Every day, at 3. Professor Marvin.

VIII. LOCATION OF RAILWAYS. First three-fifths of the 2d term. Every day, at 9. Professor Marvin.

IX. ROADS AND PAVEMENTS. Last two-fifths of the 2d term. Every day, at 9. Mr. Murphy.

X. SANITARY ENGINEERING. 1st term (a). Every day, at 11. Professor Marvin.

XI. WATER SUPPLY. 2d term (a). Every day, at 11. Mr. Murphy.

XII. MASONRY. 1st term (b). Every day, at 9. Mr. Murphy.

XIII. IRRIGATION. 2d term. Every day, at 3. Mr. Murphy.

XIV. GEODESY. 1st term. Every day. Professor Marvin.

7.—Physics.

I. MECHANICS, ELECTRICITY, AND MAGNETISM. Lectures and experimental demonstrations. 1st term. Four days, at 11, with one day collateral reading or one afternoon laboratory work. Prerequisite: Plane trigonometry. Professor Blake and Mr. Rice.

II. SOUND, HEAT, AND LIGHT. Lectures and experimental demonstrations. 2d term. Four days, at 11, with one day collateral reading or one afternoon laboratory work. Prerequisite: Plane trigonometry. Professor Blake and Mr. Rice.

III. THEORY OF LIGHT. An advanced experimental study of the phenomena of velocity, refraction, double refraction, polarization, interference and dispersion, together with the mathematical treatment necessary for the understanding of modern methods and apparatus employed. Reference books: Preston's Theory of Light, Verdet's *Leçons sur l'Optique*, Scheiner's *Astronomical Spectroscopy*. Prerequisites: Calculus, physics I and II, or equivalent. Either term, daily, at convenience of instructor. Mr. Rice.

IV. ELECTRIC OSCILLATIONS. Deduction and use of Maxwell's and Hertz's Equations of the Electromagnetic Field. Electromagnetic theory of light, and a critical study of the work of Hertz and his successors. Text and reference books: Poincaré, Hertz, Von Helmholtz, Boltzman, and Thomson. Prerequisites: Calculus, differential equations, and physics I and II. Either term. Every day, at convenience of instructor. Mr. Dunstan.

V. THERMODYNAMICS OF GASES. Saturated and superheated vapors. Theory of the steam and other heat engines. Engine and boiler testing, including Hirn's Analysis. Text-book: Peabody's *Thermodynamics of the Steam-Engine*. Prerequisites: Calculus, physics I and II. First term. Every day, at 11. Mr. Dunstan.

VI. DYNAMO-ELECTRIC MACHINERY. Theory and design of direct-current generators and motors. Text-book: Thompson's *Dy-*

namo-Electric Machinery. Prerequisites: Plane trigonometry and physics I. Second term. Every day, at 9. Mr. Dunstan.

VII. THEORY OF ELECTRICITY AND MAGNETISM. Mathematical development of the fundamental principles of eletrostatics, magnetism, and of direct currents of constant E. M. F., with special reference to their variable stage. Text-book: Nipher's Mathematical Theory of Electricity and Magnetism. Prerequisites: Calculus and physics I. First term. Every day, at 1. Professor Blake.

VIII. THEORY OF ALTERNATING CURRENTS. Development of the general equations in circuits containing resistance, self-induction and capacity. This course is intended to develop the mathematical treatment of single-phase-current phenomena. Text-book: Steinmetz's Alternating-Current Phenomena. Prerequisites: Calculus and physics I and VIII. Second term. Every day, at 1. Professor Blake.

8.—Mathematics and Astronomy.

Mathematics.

I. ALGEBRA. Wells. 1st term (a). Every day, at 8, 9, 10, and 11. *Required of all Freshmen.* Professor Miller, Professor Newson, and Mr. Rice. PLANE TRIGONOMETRY. Miller. 1st term (b). Every day, at 8, 9, 10, and 11. *Required of all Freshmen.* Professor Miller, Professor Newson, and Mr. Rice.

II. SPHERICAL TRIGONOMETRY (a) AND THEORY OF EQUATIONS (b). 2d term. Every day, at 8, 9, and 10. *Freshman alternative.* Professor Miller, Professor Newson, and Mr. Rice.

III. ANALYTIC GEOMETRY. *Sophomore alternative.* 1st term. Every day, at 8. Must be preceded by I and II. Professor Newson.

IV. CALCULUS. Osborne. *Sophomore alternative.* 2d term. Every day, at 8. Must be preceded by III. Professor Miller.

V. MODERN GEOMETRY. Scott. 2d term. Every day, at 11. Must be preceded by III. Professor Newson.

VI. THEORY OF EQUATIONS. Burnside and Panton. 1st term. Every day, by appointment. Must be preceded by III and IV. Professor Miller.

VII. ADVANCED CALCULUS. Williamson. 2d term. Every day, at 11. Must be preceded by IV. Professor Newson.

VIII. DIFFERENTIAL EQUATIONS. 1st term. Every day, at 11. Must be preceded by IV. Professor Newson.

Courses V and VI are given in alternate years with courses VII and VIII; VII and VIII will be given in 1898-'99.

Astronomy.

IX. DESCRIPTIVE ASTRONOMY. Lectures and recitations, with occasional evenings for observation. Young's Astronomy. 1st term. Every day, at 11. Professor Miller.

X. PRACTICAL ASTRONOMY, including the Theory of Least Squares.

Use of a sextant and transit instrument, determinations of time, latitude and longitude, etc. Doolittle's Practical Astronomy or Barlow and Bryan's Mathematical Astronomy. 2d term. Every day, at 11. Must be preceded by IX, and by III and IV. Professor Miller.

9.—Philosophy.

I. ELEMENTARY LOGIC AND PSYCHOLOGY. *Sophomore alternative.* 2d term. Every day, at 10. Professor Templin.

II. EXPERIMENTAL PSYCHOLOGY. 1st term. Every day, at 3. Professor Templin.

III. ETHICS. 1st term. Every day, at 2. Professor Templin.

IV. HISTORY OF PHILOSOPHY. 2d term. Every day, at 11. Professor Templin.

V. ADVANCED LOGIC. 2d term (*a*). Every day, at 9. Professor Templin.

VI. METAPHYSICS. 2d term (*b*). Every day, at 9. Professor Templin.

VII. ÆSTHETICS. 1st term (*b*). Every day, at 4. Professor Templin.

10.—Sociology and Political Economy.

Economics.

I. ELEMENTS OF POLITICAL ECONOMY. 1st term. Every day, at 3. Professor Blackmar.

II. MONEY AND BANKING. 2d term (*a*). Every day, at 3. Professor Blackmar.

III. TAXATION AND FINANCE. 2d term (*b*). Every day, at 3. Professor Blackmar.

IV. HISTORY AND THEORY OF POLITICAL ECONOMY. 1st term. Every day, at 2. Professor Blackmar.

V. UNSETTLED QUESTIONS IN POLITICAL ECONOMICS. 2d term. Every day, at 2. Professor Blackmar.

Sociology.

VI. PRINCIPLES OF SOCIOLOGY. 1st term. Every day, at 1. Professor Blackmar.

VII. SOCIAL PATHOLOGY. 2d term. Every day, at 1. Professor Blackmar.

VIII. ECONOMIC SEMINARY, for advanced students in political economy and sociology. Meets at 5 o'clock on Tuesdays, in room 15.

Advanced Courses.

IX. ECONOMICS. Open to graduates, and to students who have taken undergraduate courses III, V, VI, and VII. A seminary will be conducted in connection with this course, which will meet regularly once each week. Professor Blackmar.

X. POLITICAL AND SOCIAL INSTITUTIONS. Open to graduates, and to students who have taken undergraduate courses I and IV in sociology, and courses III and VII in European history. Professors Blackmar and Adams.

11.—European History.

I. ENGLISH HISTORY. *Sophomore alternative*. 1st term. Every day, at 9, 10, and 2 (three sections). Professor Adams and Mr. Price.

II. FRENCH AND GERMAN HISTORY. 1st term. Every day, at 9. Professor Adams.

III. EUROPEAN CONSTITUTIONS. 1st term. Every day, at 11. Professor Adams.

IV. RENAISSANCE AND REFORMATION. 2d term. Every day, at 9. Professor Adams.

V. FEDERAL GOVERNMENT AND THE FRENCH REVOLUTION. 2d term. Every day, at 11. Professor Adams.

VI. POLITICAL HISTORY OF MODERN EUROPE. 2d term. Every day, at 10. Professor Adams.

VII. ENGLISH CONSTITUTIONAL HISTORY. 2d term (a). For advanced students. Hours by appointment.

12.—American History and Administration.

I. COLONIAL HISTORY, 1492-1763. 1st term (a). Every day, at 2. Professor Hodder.

II. THE REVOLUTION AND CONFEDERATION. 1st term (b). Every day, at 2. Professor Hodder.

III. CONSTITUTIONAL LAW. 2d term (a). Every day, at 2. Not necessarily preceded by either course I or II. Professor Hodder.

IV. INTERNATIONAL LAW. 2d term (b). Every day, at 2. Professor Hodder.

V. PRESIDENTIAL ADMINISTRATIONS—Washington to Jackson. 1st term. Every day, at 3. Open to Seniors, and to other students who have passed course III creditably. Professor Hodder.

VI. PRESIDENTIAL ADMINISTRATIONS—Jackson to Lincoln. 2d term. Every day, at 3. Continuation of course V. Professor Hodder.

Seminary of Historical and Political Science.

General Seminary, throughout the year, at 4. For all students of the departments of history and of sociology and political science.

13.—Greek.

I. ELEMENTARY GREEK. Gleason and Atherton's or White's First Greek Book. 1st term. Every day, at 11. *Open to all students who enter without Greek*. Mr. Sterling.

II. CONTINUATION OF COURSE I. Xenophon's *Anabasis*. 2d term. Every day, at 11. Mr. Sterling.

III. HOMER. Seymour's School *Iliad*, six books. Jebb's Introduction to the *Iliad* and *Odyssey*. Sight-reading in the New Testament. 1st term. Every day, at 9. For Freshmen who have entered with elementary Greek and the *Anabasis*, or Sophomores, Juniors or Seniors who are prepared for it. Professor Wilcox.

IV. MORGAN'S EIGHT ORATIONS OF LYSIAS. Exercises in prose composition. Sight-reading in the New Testament. 2d term. Every day, at 9. To follow course III. Mr. Sterling.

V. PLATO'S APOLOGY AND CRITO; THE PHILIPPICS OF DEMOSTHENES. Exercises in prose composition. Sight-reading. 1st term. Every day, at 9. Open to all who have taken courses III and IV, or their equivalents. Mr. Sterling.

VI. THE ANTIGONE OF SOPHOCLES; IPHIGENIA AMONG THE TAU-RIANS OF EURIPIDES; AND PROMETHEUS OF ÆSCHYLUS. Lectures on the Greek theater. Sight-reading. 2d term. Every day, at 9. Open to all students who have taken courses III and IV, or their equivalents. Professor Wilcox.

VII. ARISTOPHANES: *Clouds*, *Acharnians*, *Frogs*, and *Birds*. Lectures and private reading on comedy and Attic history. 1st term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1898-'99. Professor Wilcox.

VIII. HOMER'S *ILIAD*. Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 2d term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1898-'99. Professor Wilcox.

IX. HOMER'S *ODYSSEY*. Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 1st term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1897-'98. Professor Wilcox.

X. PLATO: *Gorgias*, *Phædo*, and Purvis's Selections. Critical interpretation of the first, rapid reading of the rest. Lectures and private reading on Plato and Greek philosophy. 2d term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1897-'98. Professor Wilcox.

XI. THE GREEK IN ENGLISH. The elements of Greek, with especial reference to English. This course covers the elements of inflection and syntax, and serves as an introduction to the following course. 1st term. Every day, at 10. Open to Juniors and Seniors who have had no Greek. Mr. Sterling.

XII. ATTIC GREEK. Stories and legends and selections from prose authors. Translation; so much grammar only as is required

by the text read. 2d term. Every day, at 10. Open to Juniors and Seniors who have taken course XI. Mr. Sterling.

XIII. HISTORY OF GREEK LITERATURE, through translations. Lectures, recitations, private reading, writing of themes. 2d term. Every day, at 11. Open to all Juniors and Seniors. Professor Wilcox.

XIV. HISTORY OF GREEK ART. Recitations, lectures, private reading, writing of themes. 1st term. Every day, at 11. Open to all Juniors and Seniors. Professor Wilcox.

Greek Symposium.—All Greek students in the University meet once a fortnight in a united class to listen to lectures on subjects of more general interest than special class work, or of such a character as to need a larger amount, or different kind, of illustrative material than is available in the class room. The subjects the last four years have been Greek architecture and its continuation and revival in later and modern times, Greek sculpture, famous Greek sites and scenes, and the latest excavations on Greek soil; all illustrated by stereopticon slides.

14.—Latin.

I. CICERO (*De Amicitia*) AND LIVY (one book). With prose composition based on the text read, grammar, and sight-reading. 1st term. *Open to Freshmen.* Every day, at 9 and 11. Miss Oliver.

II. HORACE. With prose composition, grammar, and sight-reading. 2d term. *Open to Freshmen.* Every day, at 9 and 11. Miss Oliver.

III. CICERO'S LETTERS, AND CATULLUS. With prose composition, grammar, and sight-reading. 1st term. *Open to Sophomores.* Every day, at 10. Professor Walker and Miss Oliver.

IV. PLAUTUS AND TERENCE, AND TACITUS (*Agricola* and *Germania*). With prose composition and sight-reading. 2d term. *Open to Sophomores.* Every day, at 10. Professor Walker and Miss Oliver.

V, VI, VII, VIII. ADVANCED WORK IN LATIN. This work proceeds with the double aim of fitting for graduate study and for the practical work of Latin instruction. Some one author or department of Roman literature is chosen each year as the center of study. Horace has been selected for the year 1898-'99. Those who are pursuing this advanced work for the first year will meet once a week in the proseminary for the critical interpretation, by the students in turn, of portions of Horace, or for discussions of the simpler questions involved in Horatian criticism. Those who are in their second year of this work will meet once a week in the seminary for more difficult work of the same kind. The members of the proseminary will meet once a week for lectures on the historical syntax of the verb. The members of the seminary will meet once a week for the study of

Latin literature. All will meet together twice a week for the reading of Horace, Persius, and Juvenal, and once a week for Latin prose composition. A considerable amount of private reading will be required of each student. 1st and 2d terms. *Open to Juniors and Seniors* who have had courses I, II, III, and IV, or their equivalents. Every day, at 8 or 1. Professor Walker.

Detailed statement of courses, scholarships, methods and apparatus sent on application to the head of the department.

15.—German.

I.* OUTLINE OF GRAMMAR (Otis), WITH COMPOSITION EXERCISES. Brandt's Reader. 1st term. Every day, at 9 and 11. Mr. Engel and Mrs. Franklin.

II. (a) BRANDT'S READER (completed), WILHELM TELL. Also sight-reading. 2d term. Every day, at 9 and 11. Mr. Engel and Mrs. Franklin. (b) SCIENTIFIC PROSE. Gore's Scientific Reader, monographs. For engineering students only. 2d term. Every day, at 8. Mr. Engel.

III. KARL DER GROSSE, DIE JOURNALISTEN, BURG NEIDECK. Sight-reading. 1st term. Every day, at 8 and 9. Mr. Engel and Mrs. Franklin.

IV. WALLENSTEIN (complete). 2d term. Every day, at 9 and 11. Mr. Engel and Mrs. Franklin.

V. (a) COMPOSITION, TRANSLATION OF CONNECTED ENGLISH (Howell's Farces or Harris's Composition), half course. Mr. Engel. (b) FAUST (part I), half course. 1st term. Every day, at 11. Professor Carruth.

VI. NATHAN DER WEISE, EKKEHARD. 2d term. Every day, at 11. Professor Carruth.

VII. GERMAN LITERATURE OF THE EIGHTEENTH CENTURY. Lectures, with reading of masterpieces out of class, with comment on more difficult works in class. Essays and criticism, by members of the class. Klopstock, Wieland, Lessing, Herder. 1st term. Every day, at 10. Open only to students who have had German III, IV. Professor Carruth.

VIII. GERMAN LITERATURE OF THE EIGHTEENTH CENTURY (continued). Goethe, Schiller, and the close of the century. 2d term. Every day, at 10. Professor Carruth.

IX. GERMAN HISTORICAL NOVELS: Hauff, Scheffel, etc. Careful reading in class of one work by each author, others rapidly outside. Lectures on the history of the novel and on methods and schools in fiction. Theses on separate authors and on the whole course, by members of the class. 1st term. Every day, at 10. Not given in 1898-'99. Professor Carruth.

* The full three years of Latin for entrance is required as preparation to German I.

X. GERMAN HISTORICAL NOVELS (continued): Freytag, Dahn, etc. 2d term. Every day, at 10. Not given in 1898-'99. Professor Carruth.

XI. TEACHERS' COURSE. Advanced grammar, with theory and practice of language teaching. Full course. Intended especially for those who desire to fit themselves for teaching German in high schools. 1st and 2d terms. Every day. Hour not set. Professor Carruth and Mr. Engel.

XII. GOTHIC. Phonetics and introduction to Germanic philology. 1st term. Every day, at 2. Professor Carruth.

XIII. LUTHER AND THE SIXTEENTH CENTURY. Reading and grammatical study of the German literature of the Reformation, preceded by an outline of historical German grammar. 2d term. Every day, at 9. Professor Carruth.

16.—French.

I. GRAMMAR (Van Daell and Grandgent) AND READER (Super). Drill in forms and elementary syntax. Elementary composition and dictation. 1st term. Every day, at 9 and 11. Professor Canfield and Miss Galloo.

II. GRAMMAR AND SIMPLE PROSE TEXTS (Mlle. de la Seiglière; Roman d'un jeune homme pauvre). Follows I. 2d term. Every day, at 9, 10, and 11. Professor Canfield, Miss Galloo, and Miss Parrott.

III. MODERN FRENCH PROSE of Mérimée, Gautier, Hugo, Daudet, Pailleron, and others. Rapid reading for acquirement of vocabulary, and advanced syntax. Dictation and practice in writing. 1st term. Every day, at 9. Professor Canfield.

IV. THE CLASSIC DRAMA. Plays of Corneille and Racine. Dictation and practice in writing. 2d term. Every day, at 9. Professor Canfield.

V. (a) MOLIERE (one-half term). (b) FRENCH COMPOSITION AND CONVERSATION (one-half term). 1st term. Every day, at 11. Miss Galloo.

VI. THE SEVENTEENTH CENTURY. Fables, letters, memoirs, novels, sermons, satires. 2d term. Every day, at 11. Professor Canfield.

VII. THE ROMANTIC SCHOOL (1800-1835): A. de Vigny, Chateaubriand, Lamartine, Hugo, A. de Musset. 1st term. Every day, at 10. Professor Canfield.

VIII. THE DEVELOPMENT OF THE NOVEL: Hugo, George Sand, Balzac. 2d term. Every day, at 10. Professor Canfield.

IX. ADVANCED COMPOSITION. Daily exercises in writing and speaking French. 2d term. Given in 1897-'98. Alternates with course X. Every day, at 11. Must be preceded by course V (b), or its equivalent. Miss Galloo.

X. HISTORY OF FRENCH LITERATURE. Lectures, recitations, and private readings. 2d term. Given in 1898-'99. Alternates with course IX. Every day, at 11. Miss Galloo.

17.—English.

A.—English Literature.

I. HISTORY OF ENGLISH LITERATURE. Pancoast's Introduction to English Literature, supplemented by library work. 2d term. Every day, at 8 and 10. *Required of all Freshmen except those admitted with two or three years of English.* Mr. O'Leary.

II. EIGHTEENTH CENTURY LITERATURE. Gosse's History of Eighteenth Century Literature; Hales's Longer English Poems. 2d term. Every day, at 9 and 11. *Sophomore alternative.* Mr. Jones.

III. BACON AND MILTON. Bacon's Essays, or Advancement of Learning; Milton's Minor Poems and Paradise Lost. 1st term. Every day, at 10. Mr. Jones.

IV. SHAKSPERE. Three plays. 1st term. Every day, at 10. Professor Dunlap.

V. SHAKSPERE. Three plays. 2d term. Every day, at 10. Professor Dunlap.

VI. AMERICAN LITERATURE. Philosophy and criticism. Lectures, recitations, reports upon authors read, and discussions. 1st term. Every day, at 9. Professor Hopkins.

VII. CHAUCER AND SPENSER. 2d term. Every day, at 11. Professor Dunlap.

VIII. ENGLISH LITERATURE OF THE NINETEENTH CENTURY. 1st term. Every day, at 11. Professor Dunlap.

IX. INVENTION AND CRITICAL ANALYSIS. Study of special forms of literature, development, methods, and theories, with practice in invention. For advanced students only; should be preceded by English B VI, and by at least two terms of English literature besides I and II. 1st term. Every day, at 11. Professor Hopkins.

All courses except I and II are Junior and Senior optionals, and are open only to those who have completed courses I and II, or their equivalent.

B.—Rhetoric and English Language.

I. RHETORIC. Genung's Outlines of Rhetoric; English composition, with themes and exercises; lectures on English language history. 1st term. Every day, at 8 and 11. *Required of all Freshmen except those admitted with three years of English.* Mr. Jones and Mr. O'Leary.

II. ANGLO-SAXON. Bright's Anglo-Saxon Reader. 1st term. Every day, at 9. Professor Dunlap.

III. **ANGLO-SAXON.** Bright's Anglo-Saxon Reader and *Béowulf*. 2d term. Every day, at 9. Professor Dunlap.

IV. **MIDDLE ENGLISH.** Morris's Specimens of Early English, part I. 1st term. Every day, at 10. Professor Hopkins.

V. **MIDDLE ENGLISH.** Morris and Skeat's Specimens of Early English, part II; Skeat's *Piers Plowman*. 2d term. Every day, at 11. Professor Hopkins.

VI. **ADVANCED ENGLISH COMPOSITION.** Lectures, exercises, theses; practical and individual criticism as to structure and style of each student's written work. 2d term. Monday, Wednesday, and Friday: Lecture at 8; seminary at 9. Counts as a full study. Professor Hopkins and Mr. O'Leary.

VII. **TEACHERS' COURSE IN LANGUAGE AND RHETORIC.** Lectures on English philology, practical training in the criticism of manuscript, study of methods of teaching composition. To be preceded by English B VI. 2d term. Every day, at 10. Professor Hopkins.

All courses except I are Junior and Senior optionals, and should be preceded by course I, and by courses I and II in English literature. Courses II, III, IV and V should be preceded by courses I and II in German, or their equivalent; and courses IV and V should be preceded by courses II and III.

Sophomore Requirements.—Of each member of the Sophomore class are required in each term three themes* of not less than 1000 words each. These themes will be due on the following dates: First term, October 8, November 11, December 9, 1898; second term, February 10, March 17, April 21, 1899.

Junior and Senior Requirements.—Of each member of the Junior and Senior classes are required in each term two theses* or forensics of not less than 2000 words each. These papers will be due on the following dates: First term, October 14, December 2, 1898; second term, February 24, April 21, 1899.

Lectures on Forensics.—During the first half of the first term, a course for Juniors of six lectures on forensic structure and style, accompanied with illustrative exercises, will be given weekly. Attendance will excuse from the first forensic of the term.

C.—Elocution and Oratory.†

I. **THE ELEMENTS OF VOCAL EXPRESSION.**—Required of all Freshmen not electing vocal music. 1st term. Every Monday, at 2. Mrs. Clark.

II. **ACTION IN ORATORY.** Criticism of orations and declamations.

* For lists of subjects and full instructions with reference to the preparation and presentation of themes, theses, and forensics, see the bulletin issued by the department.

† After 1897-'98, the work in elocution and oratory will be in charge of Mr. Charles Vickrey.

Required of all Freshmen not electing vocal music. 2d term. Every Monday, at 2. Mrs. Clark.

III. ORATORY. Practical training in the preparation and delivery of orations. Open to Sophomores, Juniors, and Seniors. 1st term. Every Friday, at 2, or at hours for private rehearsal to be arranged with the instructor. Mrs. Clark.

18.—Pharmacy.

I. PHYSIOLOGICAL CHEMISTRY AND URINALYSIS. Laboratory work and lectures. 2d term (*a*). Every day, 8 to 10. Professor Sayre.

II. PHARMACY AND PHARMACOGNOSY. Pharmacy: 1st term (*a*). Every day, at 9. Pharmacognosy: 1st term (*b*). Every day, at 9. Mr. Wagner.

III. MATERIA MEDICA AND THERAPEUTICS. 2d term. Monday, Wednesday, and Friday, at 10. Professor Sayre.

The above optionals are offered especially to those students in the School of Arts who are preparing themselves for the study of medicine.

19.—Pedagogy.

I. HISTORY OF EDUCATION. 2d term. Every day, at 4. Professor Olin.

II. SCHOOL LAW. 1st term (*a*). Every day, at 3. Professor Olin.

III. PHILOSOPHY OF EDUCATION. 1st term (*b*). Every day, at 3. Professor Olin.

IV. SCHOOL MANAGEMENT. 2d term (*a*). Every day, at 3. Professor Olin.

V. METHODS OF INSTRUCTION. 2d term (*b*). Every day, at 3. Professor Olin.

VI. SCHOOL SUPERVISION. Open to students who have taken courses IV and V. 1st term (*a*). Every day, at 10. Professor Olin.

VII. A COMPARATIVE STUDY OF EDUCATIONAL SYSTEMS. Open to students who have taken course I. 1st term (*b*). Every day, at 10. Professor Olin.

VIII. EDUCATIONAL THEORY. A critical study of the educational doctrines found in the writings of Plato, Comenius, Locke, Rousseau, Pestalozzi, and Spencer. Open to graduates and students who have taken courses I and III. 1st term. Every day, at 10. Professor Olin.

IX. SEMINARY. Original investigation of special subjects. Open to students who have taken courses I and III. 2d term. Hours by appointment. Professor Olin.

20.—Music.

I. CONTRAPUNTAL HARMONY. Monday and Thursday, at 11. Professor Penny.

II. MUSICAL COMPOSITION. Monday and Thursday, at 9. - Professor Penny.

III. HISTORY OF THE FINE ARTS. Beginning second term. Wednesday, at 2:30. Professor Penny.

21.—Spanish.

I. GRAMMAR, READING, AND ELEMENTARY COMPOSITION. 1st term. Every day, at 10. Miss Galloo.*

II. RAPID READING, mainly in modern authors (P. A. de Alarcon, Pérez Galdos, Hartzenbusch, Juan Valera, Fernan Caballero, L. F. de Moratin). 2d term. Every day, at 10. Miss Galloo.

22.—Organic Evolution.

THE PRINCIPLES OF EVOLUTION. Lectures and readings. 1st term. Every day, at 4. Chancellor Snow.

* For the present, classes in Spanish are taught by Miss Galloo, assistant in French.

Announcement.

First

Year

Medical

Course,

Preparatory to Medicine.

University of Kansas.

Lawrence, August, 1898.

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, 9 to 10. Mr. Wagner.

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r Williston.

—Daily (a), 8 to 10. Pro-

Barber.

y, and Friday, 10 to 11.

Iuman Body. Professor

d laboratory work. Mr.

During the Junior and Senior years, the student in the School of Arts may, by availing himself of the privilege in the selection of the optional courses offered him, pursue all the above courses or their equivalents, which may be accepted by medical schools in place of the first year in their regular course in medicine.

Beginning with the fall of 1899, it is the intention to add one year to the present course, making a two-years' course in medicine, of which a description will be given in a special bulletin to be issued as soon as plans have been completed.

I. CONTRAPUNTAL HAF
Professor Penny.

II. MUSICAL COMPOSIT
fessor Penny.

III. HISTORY OF THE F
nesday, at 2:30. Professor

2

I. GRAMMAR, READING.
term. Every day, at 10. T

II. RAPID READING, mai
Pérez Galdos, Hartzenbusc
de Moratin). 2d term. Ev

22.—O

THE PRINCIPLES OF E
term. Every day, at 4. Cl

* For the present, classes in
French.

UNIVERSITY OF KANSAS.

First Year Medical Course.

FACULTY.

Chancellor F. H. SNOW, Ph. D., LL.D., President.
E. H. S. BAILEY, Ph. D., Toxicology.
L. E. SAYRE, Ph. M., B. S., Pharmacy and Ma
Medica.
S. W. WILLISTON, M. D., Ph. D., Vertebrate Ana
and Physiology.
E. C. FRANKLIN, Ph. D., Chemistry.
M. A. BARBER, A. M., Bacteriology.
GEORGE WAGNER, Ph. C., Pharmacy and
macognosy.
C. E. MCCLUNG, A. B., Ph. G., Histology.
EDWARD BARTOW, Ph. D., Chemistry.
JAMES NAISMITH, A. B., Hygiene and Physiolog

COURSE OF STUDIES.

GENERAL CHEMISTRY, daily, 3 to 5, 20 weeks.
PHARMACY AND PHARMACOGNOSY, daily, 9
20 weeks.
HUMAN OSTEOLOGY AND VERTEBRATE ANA
daily, 3 to 5, 20 weeks.
TOXICOLOGY, daily, 11 to 12, 10 weeks.
PHYSIOLOGICAL CHEMISTRY AND URINARY
YSIS, daily, 8 to 10, 10 weeks.
MATERIA MEDICA, 3 times a week, 10 to
weeks.
HISTOLOGY, daily, 1 to 3, 20 weeks.
PHYSIOLOGY, daily, 3 to 4, 20 weeks.
BACTERIOLOGY, daily, 8 to 10, 10 weeks.

THE requirements for admission to this course are: Physical Geography, General History, Civil Government, Algebra through Quadratic Equations, Radicals and Theory of Exponents, Trigonometry Plane and Solid, Physics and English the year. In addition the student must offer 3 years of Latin and 2 years of some other foreign language or additional English, except that extra foreign language may be substituted in part for Latin.

The facilities offered by the University for the pursuance of this course and the thoroughness of the instruction given have been recognized by the largest and best medical schools of the east, and recently (July, 1898) the Illinois State Board of Health passed a resolution whereby a certificate of the completion of this course will admit to the second year of any medical college recognized by that Board without examination. This action of the Board was taken after careful personal inspection of the work done here and guarantees to the University enviable recognition as a preparatory medical school of high standing. Such recognition offers to Kansas students who contemplate pursuing a medical course special inducement to do their first year work at the University where tuition is free and living expenses are low.

Beginning with the fall of 1899, it is the intention to add one year to the present course making a two-year's course in medicine, of which a description will be given in a special bulletin to be issued as soon as plans have been completed.

For further information apply to the Registrar at the University.

Medicine.

During the Junior and Senior years, the student in the School of Arts may, by availing himself of the privilege in the selection of the optional courses offered him, pursue all the above courses or their equivalents, which may be accepted by medical schools in place of the first year in their regular course in medicine.

Beginning with the fall of 1899, it is the intention to add one year to the present course, making a two-years' course in medicine, of which a description will be given in a special bulletin to be issued as soon as plans have been completed.

al Course.

The University who desire to pursue a course of study has been given in physics, chemistry, and natural history, human physiology, and comparative anatomy.

Admission.

For the medical course are the same as for the School of Arts, except that Latin is not required in part for Latin.

Professor Franklin.

Professor Bailey.

9 to 10. Mr. Wagner.

omy.—Lectures and laboratory work.

—Daily (a), 8 to 10. Professor

Barber.

y, and Friday, 10 to 11.

Human Body. Professor

and laboratory work. Mr.

I. CONTRAPUNTAL HAI
Professor Penny.

II. MUSICAL COMPOSITI
fessor Penny.

III. HISTORY OF THE F
nesday, at 2:30. Professor

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I. GRAMMAR, READING
term. Every day, at 10.

II. RAPID READING, me
Pérez Galdos, Hartzenbus
de Moratin). 2d term. E

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THE PRINCIPLES OF I
term. Every day, at 4. C

*For the present, classes i
French.

First-Year Medical Course.

In order to accommodate students of the University who desire to prepare for the profession of medicine, a course of study has been arranged by the departments of pharmacy, chemistry, and natural history, which includes materia medica, human physiology, and comparative anatomy (with dissections).

Requirements for Admission.

Entrance requirements to the first-year medical course are the same as those for the Freshman class of the School of Arts, except that any foreign language may be substituted in part for Latin.

Course of Study.

First Term:

General Chemistry.—Daily, 3 to 5. Professor Franklin.
Toxicology.—Daily (*b*), 11 to 12. Professor Bailey.
Pharmacy and Pharmacognosy.—Daily, 9 to 10. Mr. Wagner.
Human Osteology and Vertebrate Anatomy.—Lectures and laboratory work. Daily, at 3. Professor Williston.

Second Term:

Physiological Chemistry and Urinalysis.—Daily (*a*), 8 to 10. Professor Sayre.
Bacteriology.—Daily (*b*), 8 to 10. Mr. Barber.
Materia Medica.—Monday, Wednesday, and Friday, 10 to 11. Professor Sayre.
Physiology.—Daily, at 2. Martin's Human Body. Professor Williston.
Histology.—Daily, 1 to 3. Lectures and laboratory work. Mr. McClung.

During the Junior and Senior years, the student in the School of Arts may, by availing himself of the privilege in the selection of the optional courses offered him, pursue all the above courses or their equivalents, which may be accepted by medical schools in place of the first year in their regular course in medicine.

Beginning with the fall of 1899, it is the intention to add one year to the present course, making a two-years' course in medicine; of which a description will be given in a special bulletin to be issued as soon as plans have been completed.

The School of Law.

FACULTY.

F. H. SNOW, *President.*

J. W. GREEN, *Dean,*

Evidence, Contracts, Commercial Paper, Insurance, Constitutional Law, and Corporations.

W. B. BROWNELL,

Domestic Relations and Criminal Law.

J. W. GLEED,

Real Property.

A. W. BENSON,

Pleadings and Practice.

S. A. RIGGS,

Torts, and Law of Railways.

D. M. VALENTINE,

Wills and Administration.

C. L. DOBSON,

Corporations.

DAVID MARTIN,

Equity and Equity Jurisprudence.

Outline of Work.

The design of this school is to furnish a complete course of legal instruction for persons intending to practice at the bar in any state of the union. The plan of instruction includes the principles of constitutional law, international law, mercantile law, the law of contracts, corporations, insurance, torts, domestic relations, real-property law, equity jurisprudence, evidence, pleading and practice, and criminal jurisprudence.

Experience proves that the principles of law are best taught when those methods are followed which have been found most successful in teaching the sciences. Instruction is therefore given by daily recitations upon assigned portions of text-books, and the study of selected cases, the drill of the recitation room being supplemented by lectures. In addition to their law studies, the students of this school, with the consent of the Faculty, have the privilege of recitations and lectures in the School of Arts, with access to the laboratories, library, etc., subject to the rules governing "Special Students."

The complete course includes two years, each of which occupies eight and one-half months (excluding two weeks' recess at Christmas). For date of opening the school, see "Announcements."

All persons proposing to enter upon the study of law are earnestly recommended first to take a course of liberal studies. A good fundamental education is necessary to a successful study of law.

Requirements for Admission.

English, one year. See page 22.

United States History.

General History. See page 22.

Examinations in these subjects will be held at the University on Thursday, September 8, 1898, beginning at nine o'clock A.M. Graduates of colleges or universities, state normal schools, accredited high schools or academies, and persons presenting first- or second-grade teachers' certificates, are admitted without examination.

Beginning with the fall of 1899, the studies required for admission will be as follows:

1. Physical Geography.
2. History of United States, History of Greece and Rome, English History.
3. Algebra, through quadratic equations.
4. Geometry, Plane and Solid.
5. Physics. Carhart and Chute's Elements of Physics, or equivalent.
6. English: Grammar, Composition, and English Literature (according to two years' English high-school course).

Persons who have privately completed a part of the course are admitted to advanced standing in the Junior class, on satisfying the Faculty as to their qualifications. No one will be admitted to the Senior class as a regular member, except upon passing a satisfactory examination upon the requirements for admission, and also upon the work prescribed for the Junior class. Applicants for the degree of bachelor of laws must, in every case, have been admitted as regular members of the Senior class at the beginning of the Senior year, and must also have attended the Senior recitations during the entire year.

Students who are not candidates for a degree will be admitted to the school at any time, and without a preliminary examination, and

will be permitted to take such work as they may desire, provided they satisfy the instructors under whom the work is taken that they are qualified to pursue it with profit.

The Course of Study.

JUNIOR YEAR.

- Constitutional Law*—Black. Professor Green. 10 hours a week for 10 weeks.
Domestic Relations—Schouler. Professor Brownell. 6 hours a week for 6 weeks.
Contracts—Clark. Professor Green. 10 hours a week for 12 weeks.
Agency—Mechem. Professor Brownell. 10 hours a week for 6 weeks.
Bailments—Schouler. Professor Brownell. 10 hours a week for 4 weeks.
Commercial Paper—Norton. Professor Green. 10 hours a week for 8 weeks.
Partnerships—Parsons. Professor Brownell. 10 hours a week for 4 weeks.
Sales—Tiedeman. Professor Brownell. 10 hours a week for 4 weeks.

SENIOR YEAR.

- Torts*—Bigelow. Mr. Riggs. 9 hours a week for 4 weeks.
Corporations—Taylor or Beach. Mr. Dobson. 9 hours a week for 2 weeks.
Real Property—Tiedeman, Williams, and Washburn. Professor Gleed. 9 hours a week for 4 weeks.
Evidence—Greenleaf. Professor Green. 9 hours a week for 5 weeks.
Pleadings—Bliss and Gould. Mr. Benson. 9 hours a week for 4 weeks.
Equity Pleadings—Field; and Equity Jurisprudence—Bispham. Mr. Martin. 9 hours a week for 4 weeks.
Criminal Law—Clark. Professor Brownell. 9 hours a week for 4 weeks.
Corporations—(lectures). Mr. Dobson. 10 hours a week for 2 weeks.
Wills—(lectures). Mr. Valentine. 10 hours a week for 2 weeks.

Recitations are so arranged that the students can go over any subject twice, if they so desire. As a rule, students of the Senior class attend the Junior recitations as well as their own.

Moot courts are held by each class every week during the term by one of the Faculty, at each of which a cause previously assigned is taken up for practice in the conduct of causes and in the discussion of legal principles. A Kent club and other law clubs have been

formed by the students, in which dissertations are read and cases argued.

Courses of lectures will be given during the term on various topics of municipal law, on medical jurisprudence, on federal practice, on criminal law, on the law of torts, on political science, and on international law, as supplementary to the general course of instruction.

Examinations.

The members of each class are examined after the completion of each topic. Those desiring admission to the Senior class may make application at the examination in September. The degree of bachelor of laws will be conferred upon such members of the Senior class as shall be recommended by the Faculty to the Board of Regents.

By an act of the legislature, the diploma entitles the graduate to admission to the bar in the state of Kansas.

The School of Fine Arts.

Music, Painting, and Oratory.

FACULTY.

F. H. SNOW, *President.*

G. B. PENNY, *Dean,*

Professor of Harmony, Musical Composition, Pipe-Organ, and Lecturer upon
the History of the Fine Arts.

C. A. PREYER,

Professor of Pianoforte, Counterpoint, Canon, and Fugue.

J. A. FARRELL,

Professor of Voice Culture and Singing, Violin, and Italian.

A. H. CLARK,

Professor of Drawing and Painting.

C. G. DUNLAP,

Professor of English Literature.

E. M. HOPKINS,

Professor of American Literature.

H. F. JONES,

Instructor in English.

R. D. O'LEARY,

Assistant in English.

E. F. ENGEL,

Instructor in German.

MARY MARCHANT PIERCE-CLARK,

Instructor in Elocution, Oratory, and Physical Training.

E. GENEVE LICHTENWALTER,

Assistant Professor of Pianoforte.

MARTHA L. WILSON,

Instructor in Pianoforte.

L. I. BLAKE,

Lecturer on Acoustics and Optics.

A. M. WILCOX,

Lecturer upon the History of Greek Art.

This school of the University has a corps of professors who are personally familiar with the methods employed in the conservatories and art schools of Germany, Italy, France, and England. The school is equipped with excellent pianos, including six concert grands, and one of the finest three-manual organs in the West; charts for sight-reading classes, for illustrating vocal, pianoforte and lecture courses; a good collection of plaster casts, engravings, Braun auto-types, etchings, and lantern slides for illustrated lectures.

The school is organized to meet the demand for better and more extended facilities for liberal education in all branches of the fine arts. Its objects are: To furnish advanced instruction to either amateur or professional students; to combine music, painting, oratory, etc., with regular collegiate work; and to train teachers.

The plan of instruction includes courses in piano, voice culture, artistic singing, pipe-organ, violin, free-hand drawing, painting, modeling, decorative design, harmony, counterpoint, canon, fugue, musical composition, interpretation and conducting, history of the fine arts, the elements of form and instrumentation, oratory, Italian, German, French, physical training, elocution, and English.

Requirements for Admission to all Courses.

The requirements for admission are the same as in the School of Arts (see page 22), except in language, of which only three years will be required, namely, three of English, or one of English and two of either Latin, French, or German, or two of English and one of either Latin, French, or German.

Additional Requirements for all Music Courses.

The rudiments of music and harmony through the progression of common chords, including recognition of all intervals, scales, and chords, by ear; and the contents of Mason and Mathews' *Primer of Music*. Conditions in this requirement must be made up during the Freshman year.

Piano.—Candidates will be required to play in tempo, and with correct touch, fingering, and phrasing, selections from the following: Loeschorn, *Piano Technic* (ed. Peters 1416); Bach's *Preludes* and

Two-voiced Inventions; Heller, ops. 46 and 45. An equivalent amount of technical acquirement, excepting Bach, may be substituted, such as Tausig's Daily Studies, bk. I, or Koehler's Piano Technic; Lebert & Stark, bks. I and II; or Schmitt, op. 16; or Koehler's Etude-School; or Loeschorn, op. 66, with Heller, ops. 47, 46.

While the adoption of any particular method of technical training is not insisted upon, particular attention is called to the fact that a correct and musical rendering of the compositions accepted for examination is expected. Furthermore, the student must give evidence of musical talent and technical capacity to pursue the fall course profitably.

Two courses are offered in piano and voice—the collegiate course, and the artists' course.

Collegiate Course in Pianoforte.

Leading to the degree of bachelor of music.

FIRST YEAR.

First Term:

Piano, three times a week. Professor Preyer and assistant.

Technic, once a week.

Harmony—Concords and Discords, twice a week. Professor Penny.

English, *B I.* Mr. Jones.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble Playing.

Second Term:

Piano, three times a week. Professor Preyer and assistant.

Technic, once a week.

Harmony—Modulations, Inharmonic Tones, twice a week. Professor Penny.

English, *A I.* Mr. Jones.

Seminary. Professor Penny.

Recitals and Ensemble.

SECOND YEAR.

Requirements for entrance: Grades in studies of previous year; Bach's Three-voiced Inventions; Cramer; Bulow, Etudes, selected; Haydn, Variations in F minor; Beethoven, Sonata, op. 14, No. 2, or equivalent.

First Term:

Piano, three times a week. Professor Preyer and assistant.

Technic, once a week.

Harmony—Original Work with "Materials," twice a week. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble.

Three themes.

One optional study may be taken from the following list:

Voice Culture, with Italian, three times a week. Professor Farrell.

Free-Hand Drawing, three times a week. Professor Clark.

Elocution, three times a week. Mrs. Clark.

German, three times a week. Mr. Engel.

English Literature:

Nineteenth Century, every day, at 11, Professor Dunlap;
or American Literature, every day, at 9, Professor Hop-
kins; or Bacon and Milton, every day, at 10, Mr. Jones.

Second Term:

Piano, three times a week. Professor Preyer and assistant.

Technic, once a week.

Polyphonic Forms, Fugal Analysis, twice a week. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Advanced English Composition, three times a week. Professor Hopkins.

Recitals and Ensemble.

Three themes.

One of the following optional studies may be taken:

Voice Culture, with Italian, three times a week. Professor Farrell.

Drawing, three times a week. Professor Clark.

Elocution, three times a week. Mrs. Clark.

German, three times a week. Mr. Engel.

English Literature (eighteenth century), every day. Mr. Jones.

THIRD YEAR.

Requirements for entrance: Grades in studies of previous years; Bach, Well-tempered Clavichord, vol. 1, Prelude and Fugue in D major; Clementi's Etudes (Gradus), selected; Czerny, op. 740, Octave Study in G major; Beethoven, Sonata, op. 26; Mozart, Concerto in D minor, or equivalent.

First Term:

Piano, twice a week. Professor Preyer.

Composition (musical forms), once a week. Professor Penny.

Counterpoint—Single, once a week. Professor Preyer.

Seminary, Wednesdays. Professor Penny.

Oratorio, once a week (optional). Professor Penny.

Acoustics and Optics, twenty lectures. Professor Blake.

Recitals and Ensemble.

Two forensics.

One of the following optionals may be taken:

Voice Culture and Singing, three times a week. Professor Farrell.

Drawing and Painting, three times a week. Professor Clark.
 Elocution and Physical Training, three times a week. Mrs. Clark.

German, three times a week. Mr. Engel.

English Literature—any one of the optionals on pages 47, 48.

Second Term:

Piano, twice a week. Professor Preyer and assistant.

History of the Fine Arts (mythology and archæology), once a week. Professor Penny.

Composition (musical forms), once a week. Professor Penny.

Counterpoint—Double, once a week. Professor Preyer.

Seminary, Wednesdays. Professor Penny.

Oratorio, once a week (optional). Professor Penny.

Recitals and Ensemble.

One of the following optionals may be taken:

Voice Culture and Singing, three times a week. Professor Farrell.

Drawing and Painting, three times a week. Professor Clark.

Elocution and Physical Training, three times a week. Mrs. Clark.

German, three times a week. Mr. Engel.

English Literature—any one of the optionals on pages 47, 48.

FOURTH YEAR.

Requirements for entrance: Grades in studies of previous years; Mendelssohn, Variations Serieuses; Beethoven, Sonata, op. 31; Chopin, op. 10, Nos. 5 and 12; Kullak, Octave Study, No. 5, or equivalent.

First Term:

Piano, twice a week. Professor Preyer.

History of the Fine Arts. Professor Penny.

Composition (variation forms, rondo, sonata), once a week. Professor Penny.

Canon and Fugue, once a week. Professor Preyer.

Recitals and Ensemble.

Second Term:

Piano, twice a week. Professor Preyer.

Composition (instrumentation, string quartette, overture, cantata), once a week. Professor Penny.

Canon and Fugue, once a week. Professor Preyer.

History of Music, weekly lecture. Professor Penny.

Graduating thesis.

The work in piano, outlined in brief, is as follows: Koehler's Virtuosity Studies; Bach's Inventions, English Suites, and Well-tempered Clavichord; Carl Reinecke's School of Etudes from Cramer, Clementi, Thalberg, Moscheles, etc.; Kullak's School of Octave

Playing; Chopin's ops. 10, 25; Rubenstein, op. 23; Liszt's Transcendentals; concert pieces, concertos, etc.; Henselt, op. 125; Liszt, Concert Etudes.

Artists' Courses

In Piano, Voice, Violin, Organ, or Musical Composition.

These courses are the same as the collegiate courses in these subjects, requiring for graduation a graduating recital or a programme of original musical compositions.

For entrance and continuation in these courses the highest grade will be required in all examinations in piano, voice, organ, violin, or composition. The Senior work in composition, canon and fugue may be omitted in the piano, voice and violin courses.

Collegiate Course in Voice.

Leading to the degree of bachelor of music.

FIRST YEAR.

First Term:

Voice, three times a week. Professor Farrell.
Harmony, twice a week. Professor Penny.
English, *B I.* Mr. Jones.
Italian, twice a week. Professor Farrell.
Seminary, Wednesdays. Professor Penny.
Recitals.

Second Term:

Voice, three times a week. Professor Farrell.
Harmony, twice a week. Professor Penny.
English, *A I.* Mr. Jones.
Italian, twice a week. Professor Farrell.
Seminary, Wednesdays. Professor Penny.
Recitals.

SECOND YEAR.

First Term:

Voice, three times a week. Professor Farrell.
Harmony, twice a week. Professor Penny.
Seminary, Wednesdays. Professor Penny.
Choir and Church Music, once a week. Professor Penny.
Recitals.
Three themes.

One of the following optionals may be taken :

Piano, three times a week. Professor Preyer and assistant.
Elocution, three times a week. Mrs. Clark.
Free-Hand Drawing, three times a week. Professor Clark.
German, three times a week. Mr. Engel.
English Literature, daily :

Nineteenth Century, Professors Dunlap; or American Literature, Professor Hopkins; or Bacon and Milton, Mr. Jones.

Second Term:

Voice, three times a week. Professor Farrell.

Polyphonic Forms, Fugal Analysis, twice a week. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Church and Choir Music, once a week. Professor Penny.

Advanced English Composition. Professor Hopkins.

Recitals.

Three themes.

One of the following optionals may be taken :

Piano, three times a week. Professor Preyer and assistant.

Elocution, three times a week. Mrs. Clark.

Free-Hand Drawing, three times a week. Professor Clark.

German, three times a week. Mr. Engel.

English Literature (eighteenth century), daily. Mr. Jones.

THIRD YEAR.

First Term:

Voice, twice a week. Professor Farrell.

Oratorio, once a week. Professor Penny.

Composition (musical forms). Professor Penny.

Counterpoint—Single. Professor Preyer.

Seminary, Wednesdays. Professor Penny.

Acoustics and Optics, twenty lectures. Professor Blake.

Two forensics.

One of the following optionals may be taken :

Piano, three times a week. Professor Preyer and assistant.

Elocution and Physical Training, three times a week. Mrs. Clark.

Drawing and Painting, three times a week. Professor Clark.

German, three times a week. Mr. Engel.

English Literature—any one of the list on pages 47, 48.

Second Term:

Voice, twice a week. Professor Farrell.

Composition (musical forms). Professor Penny.

Counterpoint—Double. Professor Preyer.

History of the Fine Arts, weekly lecture. Professor Penny.

Opera, once a week. Professor Penny.

One of the following optionals may be taken :

Piano, three times a week. Professor Preyer and assistant.

Elocution and Physical Training, three times a week. Mrs. Clark.

Drawing and Painting, three times a week. Professor Clark.

German, three times a week. Mr. Engel.

English Literature—any one of the list on pages 47, 48.

FOURTH YEAR.

First Term :

- Voice, twice a week. Professor Farrell.
- Composition. Professor Penny.
- Canon and Fugue. Professor Preyer.
- Oratorio, once a week. Professor Penny.
- History of the Fine Arts, weekly lecture. Professor Penny.

Second Term :

- Voice, twice a week. Professor Penny.
- Composition. Professor Penny.
- Canon and Fugue. Professor Preyer.
- Opera, once a week. Professor Penny.
- Dramatic Action. Mrs. Clark.
- History of Music, weekly lecture. Professor Penny.
- Graduating thesis.

Normal Course in Public-School Music and Singing at Sight.

Two Years. The study of notation, intervals, scales, singing at sight, elementary harmony, thorough study of the system used, management of children's voices, methods of teaching the subject in graded schools, etc., combined with practical drill in the class room. Tonic sol-fa and staff notation are both used.

The first year's work is an optional with elocution, required of all Freshmen and Sophomores in the School of Arts.

The second year consists of private instruction, in voice culture, in connection with the regular Freshman work—harmony, seminary, and oratorio.

Course in Violin.

This course is the same as the course in piano, with the exception that violin is substituted throughout for piano.

FIRST YEAR.

- Herman's Violin School, vol. I.
- Wichtl School, book I.
- Kayser, thirty-six studies, book I.
- Duets and compositions by Daube, Dancla, Bruni, Herman, Pleyel, and Kron.

SECOND YEAR.

- Herman's Violin School, vol. II.
- Kayser, thirty-six studies, books II and III.
- Dont, Gradus ad Parnassum.
- Schradieck, technic.
- Viotti and Dancla, duets.
- Fantasies and compositions by Singelee, Leonard, Papini, Herman, Alard, and De Beriot.

THIRD YEAR.

Bendix, scale studies.

Schradieck, scales and technic.

Kreutzer, forty studies.

Fiorrillo, thirty-six studies.

Mazas, artistic duets.

Concert studies and compositions by Leonard, Papini, David, De Beriot, Sauret, Viotti, Rode, and Kreutzer.

FOURTH YEAR.

Rode, thirty-six studies.

Dancla, twenty studies.

De Beriot concerts.

Mendelssohn concert.

Sauret and David concert pieces.

Wieniawski concert pieces.

Spohr concerts.

Vieuxtemps concert pieces.

Beethoven concert.

Bruch concert.

Sarasati.

Course in Pipe-Organ Playing and Church Music.

This department now offers to students intending to become professional church musicians, organists and choir masters special facilities for the study of pipe-organ playing in connection with the service of the church and for concert work. The most complete pipe-organ in the state has been recently erected in University Hall by the firm of Wm. King & Sons, of New York. The organ has three manuals, thirty-two stops, with twelve combination accessories. The organ consists of an electric action, with a movable console, attached by means of a fifty-foot cable. An electric motor runs the organ.

The following is an *outline of the course*, leading to the degree of bachelor of music:

FIRST YEAR.

First Term:

Piano, three times a week. Professor Preyer and assistant.

Voice Building for Speech and Song, class work, once a week.
Professor Penny.

Harmony—Concords and Discords, twice a week. Professor Penny.

English, *B I.* Mr. Jones.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble Playing.

Second Term:

Piano, three times a week. Professor Preyer and assistant.

Voice, class work in sight singing, once a week. Professor Penny.

Harmony—Modulations, Inharmonic Tones, Harmonization of Hymn Tunes, twice a week. Professor Penny.

English, A I. Mr. Jones.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble.

SECOND YEAR.

Requirements for entrance: Grades in studies of previous year; Bach's Three-voiced Inventions; Cramer; Bulow, Etudes, selected; Haydn, Variations in F minor; Beethoven, Sonata, op. 14, No. 2, or equivalent.

First Term:

Piano, twice a week. Professor Preyer and assistant.

Contrapuntal Harmony—Original Work with "Materials," Harmonization of Original Hymn Tunes, twice a week. Professor Penny.

Seminary, Wednesdays, Professor Penny.

Recitals and Ensemble.

Three themes.

One of the following optional studies may be taken :

Voice.

Free Hand-Drawing (see piano course).

German.

Elocution.

English Literature.

Second Term.

Organ, three times a week. Professor Penny.

Composition (polyphonic music, fugal analysis), twice a week. Professor Penny.

Ecclesiastical Music and Hymnology—the Early Christian Church, Gregorian Tones. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble.

Advanced English Composition.

Three themes.

One of the following optionals may be taken :

Voice.

Free-Hand Drawing.

German.

Elocution.

English Literature.

THIRD YEAR.

Requirements for entrance: Grades in studies of previous year.

First Term:

Organ, twice a week. Professor Penny.

Composition (musical forms), once a week. Professor Penny.

Counterpoint, once a week. Professor Preyer.

Ecclesiastical Music and Hymnology — Mediæval and Reformation Periods. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Acoustics and Optics, twenty lectures. Professor Blake.

Oratorio, once a week. Professor Penny.

Choir, once a week.

Recitals and Ensemble.

Two forensics.

One of the following optionals may be taken :

Voice.

German.

Elocution.

English Literature.

Drawing and Painting.

Second Term:

Organ, twice a week. Professor Penny.

History of the Fine Arts (mythology and archæology), lectures, once a week, with outside reading. Professor Penny.

Composition (musical forms), once a week. Professor Penny.

Counterpoint, once a week. Professor Preyer.

Ecclesiastical Music and Hymnology — Analysis of Hymns, Study of Psalms and Psalteries. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Oratorio, once a week. Professor Penny.

Choir and Congregational Singing.

Recitals and Ensemble.

One of the following optionals may be taken :

Voice.

German.

Elocution.

English Literature.

Drawing and Painting.

FOURTH YEAR.

Requirements for entrance: Grades in studies of previous year; second year of one of the optional studies (voice, piano, German, or elocution).

First Term:

Organ, twice a week. Professor Penny.

History of the Fine Arts, lectures, with outside reading, essays, etc. Professor Penny.

Composition (variation forms, ronda, sonata), once a week. Professor Penny.

Canon, Fugue, once a week. Professor Preyer.

Ecclesiastical Music and Hymnology — History of English Psalmody.

Recitals and Ensemble.

Second Term:

Organ, twice a week. Professor Penny.

Composition (instrumentation, string quartette, overture, cantata), once a week. Professor Penny.

Canon, Fugue, once a week. Professor Preyer.

History of Music, lectures, with outside reading and essays. Professor Penny.

History and Development of Church Music. Professor Penny.

Graduating thesis.

The following is an outline of the work in organ:

First Year.—(See piano course.)

Second Year.—(See piano course.)

Organ.—Manual and Pedal Studies, Dr. John Stainer (London).

Third Year (Organ).—Dudley Buck's Choir Accompaniment; Bach's Easy Preludes and Fugues; Buck's Study in Pedal Phrasing; selections from "Church and Concert Organist," Eddy, "The Organist," Whiting, etc.

Fourth Year (Organ).—Extempore playing, Bach's Fugues; sonatas by Mendelssohn, Merkel, and Bach; accompaniments for solos, masses, cantatas, and oratorios: compositions by Best, Guilman, Ritter, Saint-Saëns, Thiele, Widor, Eddy, etc.

It will be seen that the study of the organ is not taken up until the middle of the Sophomore year, and that a pianoforte preparation is required of all regular students. Special students, however, may register for organ alone, at any time. The musical services of the Episcopal, Roman Catholic and Lutheran churches are especially studied, as well as the services of the Methodist, Presbyterian, Baptist, Congregational and other churches.

Course in Drawing and Painting.

Leading to the degree of B. P. (bachelor of painting).

The additional requirements for admission to this course will consist of an examination of the pupil's ability as a draughtsman.

Those who are deficient in entrance requirements or whose time is limited may enter as special students. The work is the same as the regular course, omitting English, German, and voice.

FIRST YEAR.

Drawing in Charcoal from Solid, every day. Professor Clark.

English, *B I*, 1st term; English, *A I*, 2d term. Mr. Jones.

Physical Training, twice a week. Mrs. Clark.

Seminary, Wednesdays.

First Steps in Perspective, Clay Modeling. Professor Clark.

Voice, class work. Professor Penny.

SECOND YEAR.

Drawing from Cast, Figure, Head, Interior, every day. Professor Clark.

Seminary, once a week.

Water Color—studies from still life and drapery.

Decorative Design.

Anatomy—perspective, composition, arrangement.

Sketching from Nature, in black and white—landscape, animals.

Professor Clark.

One of the following optionals:

Elocution, three times a week. Mrs. Clark.

Voice Culture and Singing, three times a week. Professor Farrell.

Piano, three times a week. Miss Lichtenwalter and Professor Preyer.

German, three times a week. Mr. Engel.

French, daily. Miss Galloo.

English Literature—

First term:

Nineteenth Century.

American Literature.

Bacon and Milton.

Second term:

Eighteenth Century.

THIRD YEAR.

Oil, Pastel, and Water-Color Studies, from fruit, game, still life, drapery, and interior.

History of the Fine Arts (mythology and archæology), weekly lecture, 2d term. Professor Penny.

Comparative Anatomy. Professor Dyche.

Seminary.

Acoustics and Optics, twenty lectures. Professor Blake.

Original Compositions in black and white.

Pen Drawing.

Charcoal—portraits, heads, and figure studies.

Sketching from Nature and Color.

Advanced English Composition, three times a week. Professor Hopkins.

One of the following optionals:

Voice.

Piano.

Elocution and Physical Training.

German or French.

English Literature.

FOURTH YEAR.

Advanced Painting—portrait, draped figure, landscape composition, interiors.

History of the Fine Arts. Professor Penny.

History of Greek Art. Professor Wilcox.

Original Composition in color.

Graduating painting and thesis.

One of the following optionals :

Voice.

Piano.

Elocution and Physical Training.

German or French.

English Literature.

Description of the Courses.

HARMONY, COUNTERPOINT, AND COMPOSITION.

The school offers a course of study covering four years. In the first year the work treats of intervals and scales, formation and progression of chords, modulations, suspensions, etc., with practical work in harmonizing chants, chorals, and original melodies, analyzing compositions, and ear drill. The subject of harmony is treated melodically from the beginning. In the second year follows the application of simple counterpoint in polyphonic forms—the two- and three-voice invention—choral figuration, fugue and canon. Composition is then taken up in the third year—the phrase period, two-part song, three-part song, etc., song with trio, with original work in such forms as the minuet, gavotte, romanza, etude, etc., vocal solos, terzettes for female voices, quartets and choruses. In this (third) year the study of counterpoint strict and free is likewise carried on, followed by that of canon and fugue in the Senior year. In the Senior year the variation and rondo forms are the subject of composition, then the sonatine and sonata, and finally instrumentation for string quartet, wood wind instruments, ordinary full orchestra, modern full orchestra, vocal solo and chorus with orchestra—overture—cantata.

MUSICAL HISTORY, THEORY, AND LECTURES.

The work in musical theory and analysis includes acoustics, instrumentation, and lectures upon musical art, embracing the gradual development of music from ancient to modern times. Lectures are also given upon the important points in vocal culture and a course upon the history of the fine arts, by the Dean.

SEMINARY.

The Seminary is designed especially for students fitting themselves for teachers, although all students of the school are required to attend. The work consists of lectures on the methods of teach-

ing; papers and discussions by students; careful study of the system in use in the school, which aims to combine equally the melodic and harmonic elements of music with the technical, and the examinations of other systems.

DRAWING AND PAINTING.

The basis of all art work is good drawing, and this is insisted upon throughout the course.

The course of study includes systematic and progressive instruction in the theory, history and practice of drawing and painting, decorative design, and in those other branches which bear most intimately and directly upon these arts.

Special advantages are offered to those wishing instruction in illustration. The natural scenery of Lawrence is particularly fine for landscape study. Models for portrait study are abundantly provided, and this work is a strong feature of the course.

Pupils will have access to the classical museum containing a good collection of antique casts.

ELOCUTION AND PHYSICAL TRAINING.

The course embraces a systematic course of body building and training, to correct physical defects and insure physical control. The best ideas of the Swedish, Delsarte, German and American systems are taught, with gymnasium practice and floor drill. Modern text-books on elocution are discussed, so that the student may become acquainted with all systems. Artificial methods are eradicated, and the best of the true self is developed. Especially valuable to the student of vocal and instrumental music, and of painting, has been the work in physical training and elocution.

UNIVERSITY CHORUS.

This chorus is made up of two distinct organizations—the St. Cecilia Society and the University Glee Club. As the number of voices forming each club is limited, only the best singers are selected. These form a mixed chorus of about sixty voices, which meets weekly for the study of choral music.

The two clubs meet separately for the study of glees, etc., for male voices, and part songs, etc., for female voices. The Glee Club makes an annual concert tour of the state.

ORATORIO SOCIETY.

This society consists of students and Lawrence singers. It meets weekly for the study of oratorios. The "Messiah," "Creation," "Redemption," and other oratorios have been given. One or two are given annually.

PUPILS' RECITALS AND ART EXHIBITS.

Recitals are given weekly by the professors and students of the school. Every student is obliged to attend these recitals and all concerts, and take part in the programs from time to time.

There will be an exhibit each year of pupils' work in drawing and painting.

CONCERTS.

Concerts are frequently given in Music Hall and in University Hall by the professors and advanced students of the school, and by outside talent and professionals. Every student of the school is required to attend these concerts.

LIBRARY.

In addition to the general library facilities of the University, students of the school have access to a choice collection of works on the history of music, vocal and orchestral, scores of operas, symphonies, chamber music, oratorios and cantatas, bound periodicals, pianoforte and organ music, etc. To this collection additions are constantly being made by purchase, donations, and loans. Students are urged to avail themselves as much as possible of the library facilities of the University, as an aid to intelligent and appreciative work in technical lines.

Requirements for Graduation.

Candidates for the degree of Mus.B. must complete one of the required courses of study (piano, voice, violin, organ).

In the collegiate course, each graduate must present a thesis showing original investigation in some department of musical science or art. In the artists' course, each graduate must present a thesis, and perform in public during the last year of study a concert program, or prepare a program of original compositions in small and large forms.

In the painting courses, the following is the examination given during the last month of the Senior year: artistic anatomy; artistic perspective; one charcoal head; one painted head; one painted draped figure; one painted interior; one historical composition; one emblematical composition; a thesis showing original investigation in some department of drawing and painting.

DEGREES CONFERRED.

Graduates of all the courses in piano, organ, violin and voice will receive the degree of bachelor of music; graduates in painting will receive the degree of bachelor of painting.

SPECIAL CATALOGUE.

A special catalogue of the School of Fine Arts will be sent on application to the Registrar of the University.

EXAMINATION AND REGISTRATION.

Examinations are held at Music Hall on Friday and Saturday June 10 and 11, and on Wednesday and Thursday, September 7 and 8, 1898. Students can enter the regular courses only at the beginning of the collegiate year, and must present themselves for registration on the above dates. Registration at a later date will be permitted only on the presentation of a satisfactory reason for the delay.

Rates of Tuition.

An incidental fee of \$1 per quarter (included in the regular tuition below) is charged for membership in the School. This fee is used for concerts, lectures, and for the securing of other advantages to the student.

Instruction during the first and second years in pianoforte playing, voice culture and organ is given in hour classes of four or three students, three lessons weekly; in the the third and fourth years, three in class. The year consists of four quarters or half terms of nine weeks each — all bills payable quarterly in advance. These prices include all the theoretical and collegiate studies.

First Year: Piano or organ, \$28.50 per quarter. Voice or elocution courses, \$31 per half term. Violin, \$26.50.

Second Year: Piano, voice, or organ, \$31 per quarter (without optionals).

Third Year: \$32.50 per quarter (without optionals), piano, three in class. Voice, \$30 (without optionals).

Fourth Year: Free to Kansas students, or \$35 per term to non-residents.

Drawing and painting, \$15 per quarter; three lessons a week, each lesson three hours in length.

The School of Pharmacy.

FACULTY.

F. H. SNOW, *President.*

L. E. SAYRE, *Dean,*
Pharmacy and Materia Medica.

E. H. S. BAILEY,
Chemistry and Toxicology.

S. W. WILLISTON,
Physiology.

E. HAWORTH,
Mineralogy.

W. C. STEVENS,
Botany.

E. C. FRANKLIN,
Chemistry.

A. ST. C. DUNSTAN,
Assistant in Physics.

M. A. BARBER,
Assistant in Botany.

GEORGE WAGNER, *Secretary,*
Assistant in Pharmacy.

EFFIE SCOTT FRANKLIN,
Assistant in French and German.

EDWARD BARTOW,
Assistant in Chemistry.

Course A.—Two Years.

This course embraces two years of two terms each, and the various studies included in it are usually carried during the whole term or half term, and, being progressive, it is with extreme difficulty that a student advances in his work satisfactorily unless he enter at the beginning of the University year, in September. The studies in the pharmacy course are of a very practical character and largely relate to the applied sciences. They give the student ample preparation for the responsibility connected with the practice of pharmacy and for special work in the lines of analytical chemistry and the examination of foods and medicines.

Requirements for Admission.

The candidate must pass an entrance examination in the following studies:

1. Arithmetic, including the Metric System.
2. History of the United States.
3. Geography, Descriptive and Physical.
4. English Grammar and Composition.
5. Constitution of the United States.
6. Physics.

Admission by Certificate.

Students will be admitted to this school without examination, upon presentation of the required certificate, as in the School of Arts. For times and places for application for admission and examination, see page 30.

JUNIOR YEAR.

First Term:

Pharmacy (*a*), every day, at 9. Mr. Wagner.
 Pharmacognosy (*b*), every day, at 9. Mr. Wagner.
 Physics (*a*), every day, at 11. Mr. Dunstan.
 Pharmacy Laboratory (*a*), every day, 1 to 3. Mr. Wagner.
 General Chemistry, every day, 3 to 5. Professor Franklin.

Second Term:

Latin, every day, at 8. Miss Oliver.
 Pharmacognosy (*a*), every day, at 9. Mr. Wagner.
 Pharmacy (*b*), every day, at 9. Mr. Wagner.
 Qualitative Analysis (*a*), every day, 2 to 5. Mr. Bartow.
 Pharmacy Laboratory (*b*), every day, 2 to 5. Mr. Wagner.
 Botany I, every day, 10 to 12. Professor Stevens and Mr. Barber.

SENIOR YEAR.

First Term:

Histological Botany (*a*), every day, 8 to 10. Mr. Barber.
 Physiological Chemistry (*b*), every day, 8 to 10. Professor Sayre.
 Pharmacy (*a*), every day, at 10. Professor Sayre.
 Microscopical Examination of Drugs (*b*), every day, at 10. Professor Sayre.

Toxicology (*b*), every day, at 11. Professor Bailey.

Quantitative Analysis (*a*), every day, 3 to 5. Mr. Bartow.

Drug Assay (*b*), every day, 3 to 5. Professor Sayre and Mr. Wagner.

Second Term:

Physiology (*b*), every day, at 10. Martin's Briefer Course. Professor Williston.

Mineralogy (*a*), every day, 9 to 11. Professor Haworth.

Organic Chemistry, every day, 1 to 3. Professor Franklin.

Plant Analysis (*a*), every day, 3 to 5. Professor Sayre and Mr. Wagner.

Thesis.

The instruction in the studies outlined above consists of lectures, recitations, and laboratory practice. The two subjects, materia medica and pharmacy, continue without interruption through the two college years.

In the study of botany, physics, mineralogy, and other subjects which are common to the various departments of the University, the student recites with the collegiate classes.

Privileges.

This school is an integral part of the University, and students in pharmacy have all the privileges of the University accorded to regular students, such as admission to the library and to the various collections of zoölogy, mineralogy, and botany.

Requirements for Graduation.

The degree of Ph. C. (pharmaceutical chemist) will be given to such students as complete the above course and pass a satisfactory examination upon the same. Experience in the drug business is no longer required for graduation.

Course B.—Four Years.

Leading to the degree of bachelor of science.

The requirements for admission to this course are the same as those in the School of Engineering.

FIRST YEAR.

First Term:

Chemistry.

Algebra.

English.

Second Term:

Quantitative Analysis.

Scientific German.

English.

SECOND YEAR.

First Term:

Physics.

Quantitative Analysis.

Scientific French.

Second Term:

Advanced Inorganic Chemistry.

Physics.

Materia Medica (*a*).

Pharmacy (*b*).

THIRD YEAR.

First Term:

Pharmacy (a).
 Materia Medica (b).
 Pharmaceutical Chemistry.
 Mineralogy (b).
 Assaying (a).

Second Term:

Pharmacy Laboratory.
 Organic Chemistry.
 Structural Botany.

FOURTH YEAR.

First Term:

Bacteriology (a).
 Organic Preparations.
 Physiological Chemistry (b).
 Physiology.

Second Term:

Therapeutics (b).
 Plant Analysis (a).
 Microscopic Study of Drugs (a).
 Original Research (b).
 Thesis.

Examinations.

At the end of each course examination will be held by the Faculty in such manner as may hereafter be prescribed.

Fees for Course A.

In the Junior year, the following fees are to be paid in advance by the student:

A pharmacy laboratory fee of \$20, to cover loss, breakage, gas, and use of material in the laboratory. Any balance unexpended at the end of the year is returned to the student.

General chemistry fee, \$12.

Qualitative analysis, \$6.

Any balance unexpended of chemistry fees at the end of each course is returned to the student.

A physical laboratory fee of \$2.

A botanical laboratory fee of \$1.

In the Senior year, the following fees are to be paid in advance by the student:

A pharmacy laboratory fee of \$20, as in the Junior year.

Pharmaceutical quantitative analysis, \$7.

Organic chemistry, \$10.

Any balance unexpended of chemistry fees at end of each course is returned to the student.

A botanical laboratory fee of \$1, to cover the work in structural botany.

A mineralogical laboratory fee of \$1.50.

The yearly fees for course B will be similar in amounts to the above.

No student will be assigned a desk until the necessary fees are paid.

For details of the work of the department, consult its special catalogue, soon to be issued.

The School of Engineering.

FACULTY.

F. H. SNOW, *President.*

F. O. MARVIN, *Dean,*
Civil Engineering.

E. MILLER,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

E. H. S. BAILEY,
Chemistry.

A. G. CANFIELD,
French.

L. I. BLAKE,
Physics and Electrical Engineering.

E. M. HOPKINS,
English Language.

H. B. NEWSON,
Mathematics.

E. HAWORTH,
Physical Geology.

E. C. FRANKLIN,
Chemistry.

E. C. MURPHY,
Assistant in Civil Engineering.

F. E. WARD,

Assistant in Electrical Engineering Shops.

H. F. JONES,

Assistant in English.

E. F. ENGEL,

Assistant in German.

EUGÉNIE GALLOO,

Assistant in French.

A. ST. C. DUNSTAN, *Secretary*,

Assistant in Physics and Electrical Engineering.

M. E. RICE,

Assistant in Physics and Mathematics.

W. K. PALMER,

Assistant in Mechanical Drawing.

EDWARD BARTOW,

Assistant in Chemistry.

Admission.

Every person who applies for admission to the Freshman class in the School of Engineering is required to be examined in the various subjects mentioned below, or to present a certificate from high school, academy, or college, as explained under "Admission by Certificate." An applicant may be admitted, although deficient in some of these requirements, provided such deficiency does not exceed two* terms' work; but all deficiencies must be made good within one year from the time of admission.

Requirements for Admission.

Physical Geography.

General History.—Myers, Sheldon, Barnes, or Fisher.

Civil Government.—Thorpe and Hodder's Civil Government of the United States and of Kansas, or equivalent.

Algebra.—Through quadratic equations, radicals, and theory of exponents.

Geometry.—Plane and solid.

*A "term's work" signifies one study pursued daily for a period of half a year.

Physics.—Appleton's School Physics; Gage's Elements of Physics.

English.—One year. See p. 23.

French.—One year.* See p. 25.

German.—One year.* See page 26.

For admission by certificate, see p. 26.

Special Students.—It is designed to give every opportunity for study and research to persons of mature age not enrolled as regular students, who wish and are prepared for special practical work in the lines of engineering offered by this school. Courses will be arranged for such individually, as their experience and training have qualified them.

The admission of such students and the general oversight of their work is under the control of a committee of the Engineering Faculty. All special students are subject to the same regulations as other students, except as to the number of studies taken at one time.

Changes in Requirements.

Beginning with the college year 1900-'01, the requirements will be as follows:

Physical Geography.

Physics.—One year.

Chemistry.—One-half year.

Algebra.—Through quadratic equation, radicals, and theory of exponents.

Geometry.—Plane and solid.

Free-Hand Drawing.—One year of high-school work.

General History.—Myers, Sheldon, Barnes, or Fisher.

English.—Two years.

German.—Two years.

French.—One year.

Beginning with the fall of 1900, three years of Latin may be temporarily substituted for either French or German required for entrance; but all this required French and German must be completed before graduation. If Latin is so used, no other entrance condition will be allowed.

Facilities.

The school is well equipped with apparatus of modern pattern, and from the best makers. The field instruments comprise transits, levels, compasses, solar attachments, rods, chains, tapes, plane tables, heliotropes, current meter, aneroids, and other minor instruments. Among the above are a precise level for very accurate leveling, a secondary triangulation transit for topographical work, and an alt-azi-

*Students having credit for three years of Latin, as outlined on p. 26, or two years of Latin and one year of either French or German, may be excused from either the French or German required in the engineering courses.

ment instrument for use on primary triangulations, and which has a ten-inch circle, read to single seconds of arc. These three instruments are from Fauth & Co., of Washington, D. C.

A 2000-pound cement-testing machine, with its accompanying appliances, affords an opportunity for the student to compare the different cements found on the market.

The testing laboratory contains an Olsen 100,000-pound testing machine, with the means of making tensile, compressive, transverse, torsional and shearing tests. The machine is accompanied by extensometers and compression micrometers.

Provision is made for an increase in the facilities of the testing laboratory by the addition of torsional and transverse machines.

The draughting rooms are provided with convenient tables, are well lighted, and furnished with a large line of photographs and blue prints of actual constructions.

Excellent facilities for practical work in general physics, chemistry, botany and electrical engineering are provided in the very completely equipped laboratories of the University.

The engine-house contains a battery of three low-pressure boilers, used for heating the University buildings, and also three high-pressure boilers, used for power for the shops and various dynamos. This building contains, also, a machine shop, accommodating about fifty students, and adapted to a comprehensive and practical training in machine work.

The engine-room contains a Russell four-valve medium-speed engine of 150 horse-power, fitted with reducing gear and indicator connections, and also a thirty-five-horse-power Armington & Sims high-speed engine, also fitted with indicator connections. Adjoining the engine-house is a forge house, equipped with forges, power blast, and a full assortment of blacksmith tools.

In the machine shop are a dozen large vises, with bench tools, and sufficient forge and carpenter tools, for students' use. There are, among other machines, six screw-cutting engine-lathes, sixteen-inch swing and six-foot bed; a Lodge & Davis standard engine-lathe, eighteen-inch swing and ten-foot bed; a Gray twenty-six-inch by six-foot iron planer; a Prentice twenty-five-inch-swing upright drill; a Brainerd universal milling machine, with thirty-nine-inch table and eighteen-inch vertical range; a Lodge & Davis upright drill, and a shaper, eighteen-inch swing.

In the dynamo room are several complete electric plants, used primarily for experimental and testing purposes, but also providing light and power for the University buildings. These are running every working day, and under charge of a skilled engineer. There is a 500-light Westinghouse alternator; a 750-light Fort Wayne Wood alternator, each with separate exciters; an American arc; a Western twenty K. W. compound-wound multipolar generator; a four-five K. W. General Electric standard four-pole generator; a three-horse-

power Eddy bipolar motor. Each plant has its own switch-board and station instruments, and a dozen circuits allow the different currents to be delivered to the various laboratories and lecture rooms in the other University buildings.

Each electrical student in some portion of his course spends one week in both boiler- and engine-room. In connection with the commercial uses of these electric plants, students are at work upon practical problems, such as characteristic curves, efficiency, etc., duty tests of the boilers, use of indicator cards, and power tests. Occasional visits may also be made to neighboring cities for the inspection and testing of plants.

The work of the chemistry department is done in the chemistry building, where there are three laboratories, a lecture room, balance room, store room, etc., and in five rooms in the basement of the main building. There is a good supply of apparatus and material for illustration. The students are given the advantage of the use of chemicals and glassware that are imported duty free. Belonging to this department are assay furnaces for the analysis of ores of gold and silver; combustion furnaces for organic analysis; a saccharimeter for sugar determinations; apparatus for the determination of vapor density; apparatus for gas analysis, for water analysis, for electrolytic analysis, and the usual supplies for advanced analytical work.

The technological portion of the University library contains about 2,000 volumes, while in the reading room are found the leading American and foreign engineering journals.

Courses of Instruction.

The School of Engineering at present offers four courses of instruction, viz.: The course in Civil Engineering, the course in Electrical Engineering, the course in Hydraulic and Sanitary Engineering, and the course in Chemical Engineering. All of these courses lead to the degree of *Bachelor of Science*.

All students of the school pursue the subject of pure mathematics through the calculus, which is followed by thorough courses in analytical mechanics and resistance of materials, including work in the testing laboratory in determining the physical properties of iron, steel, wood, and other structural materials.

In general physics there are given four lectures a week for a year, accompanied by weekly laboratory practice on the part of the students. Enough of French and German is given to furnish an ability to read scientific literature in these languages. The use of English is taught in both the Freshman and Senior years by regular class drill, while exercises in composition are required throughout the course. Full laboratory courses in chemistry are required of all students. Descriptive geometry, including shades and shadows, is taught by class recitations, and accompanied and followed by work in the draughting room on practical problems.

The above are the main subjects pursued in common by all students of this school.

The civil engineers add to their previous study of mechanics the subject of the mechanics of fluids, following the latter with applications to hydraulic engineering, in water-supply, sewerage, hydraulic motors, irrigation, etc. The calculations of strains in structures, and the design and proportioning of the details of roofs and bridges, is carried throughout an entire year. The work of surveying includes land surveying, mining surveys, city surveys, topography, hydrography, elementary geodasy, precise leveling, and the construction of maps and plats, and the use of various instruments on practical work in the field.

All students in civil and hydraulic engineering go into camp for four weeks during the summer vacation. In 1897 the camp was located near Lawrence, and a complete topographic survey of two sections of land was made, affording practice in base measurement, triangulation, leveling, stadia work, and field sketching. The results of the survey were embodied in contour maps made in camp, and finished plats were worked up later in the fall term. One division of the students in camp made a hydrographic survey of the Kansas river above Lawrence, including gaugings of its flow by different methods.

The classes in railway engineering are made familiar with the field work of preliminary survey, location and construction of railway lines by both class work and surveys in the field. In connection with the use of instruments, considerable attention is given to the causes of errors, their relative value, and the means to be employed to keep the errors within limits. Municipal engineering is given under the heads of water-supply, sanitary engineering, roads and pavements, etc. Under the head of masonry are considered the subjects of foundations, the handling and preparing of stone, cement, concrete, and the construction of piers and arches. Throughout the first three years of the civil engineer's course, two or three afternoons in each week are spent in the draughting rooms on exercises connected with class work, and on drawings designed to give practice in topographic drawing, with both pen and brush, in lettering, in the construction of titles, in the preparation of working drawings, in tracing, and blue printing. Habits of neatness, accuracy and dispatch are insisted upon.

The electrical engineers, in addition to the courses taken in common with other students of the school, as mentioned above, take advanced work in the physical laboratory, courses in thermodynamics, with practice with the steam-engine indicator, the theory of machine construction, together with practical work in the construction of machines. The work of the electrical-engineering student in the draughting room is directed largely to the making of working drawings of machinery. Practice in the machine shop connected with the

department of physics, and under the direction of skilled mechanics of the department, forms a part of the instruction. This practice includes vise, bench and forge work, and such general work with the machine lathe, planer, upright drill, milling machine, etc., as will enable the student to work in metals, to make small tools, as taps, dies, reamers, etc. A system of progressive machine work is required of each student throughout his course, and designed to develop manual skill and familiarity with the best general machine-shop practice.

Students who follow the hydraulic course give special attention in the last two years to sanitary engineering, including sewerage, the disposal of sewage and garbage; to water-supply, with reference to the construction of works, the selection and character of the supply and the means of its improvement; to irrigation, including rainfall, evaporation, absorption, run-off and flow of streams, waterways, reservoirs, canals, pumping machinery, the duty of water and methods of application to land; to economic geology, bacteriology, and the chemical analysis of water and soils. They also give some time to practical hydraulic work in the field.

In the course in chemical engineering, in addition to the work taken in common with the other students of this school, in the Junior year the students begin quantitative analysis, which is to a large extent the foundation of the chemical course, and involves the accurate determination of the composition of various substances, both organic and inorganic. This is followed by the course in the manufacture and purification of chemicals, especially those of an inorganic character, and at the same time work is begun in organic chemistry, which includes both lectures and recitations, and a complete elementary course in the laboratory. It is an essential preparation for the work of the Senior year. In the last year the student devotes more special attention to chemistry. Here he has an opportunity to specialize to a greater extent than in previous years, as several optionals are offered. The practical side of the work is not overlooked, and on this account such subjects as metallurgy, assaying, chemical technology and sanitary and applied chemistry are included.

Degrees.

All courses in the School of Engineering lead to the degree of bachelor of science.

All work for higher degrees is under the supervision of the Faculty of the Graduate School.

For the regulations governing the granting of advanced degrees and for statements of courses open to graduate students, see announcements under the head of "Graduate School."

Course in Civil Engineering.**FRESHMAN YEAR.***First Term:*

Scientific French.—Every day at 11. Miss Galloo.

Algebra (*a*) and Plane Trigonometry (*b*).—Every day, at 8, 9, 10, and 11. Professor Miller, Professor Newson, and Mr. Rice.

English *B I*.—Every day, at 8 or 11. Mr. Jones and assistant.

Free-Hand Drawing. Monday or Thursday, 1 to 3. Mr. Palmer.

Geometrical Drawing and Lettering.—Two days, Tuesday, Wednesday or Friday, 1 to 3. Mr. Palmer.

Physical culture.

Second Term:

Spherical Trigonometry (*a*) and Theory of Equations (*b*).—Every day at 8, 9, and 10. Professor Miller, Professor Newson, and Mr. Rice.

Chemistry.—Every day, at 8 or 10. Professor Bailey.

Scientific German.—Every day, at 8. Mr. Engel.

Descriptive Geometry.—Every day, at 9. Mr. Palmer.

Drawing: Descriptive Geometry—Plates.—Two days, Tuesday, Wednesday, or Thursday, 1 to 3. Mr. Palmer.

Physical culture.

Four-weeks summer course in field practice.

SOPHOMORE YEAR.*First Term:*

Physics.—Every day, at 11. Professor Blake.

Chemistry: Qualitative Analysis.—Every day, 9 to 11. Professor Bailey and Mr. Bartow.

Analytical Geometry.—Every day, at 8. Professor Newson.

Drawing: Shades, Shadows, and Perspective; Construction of Titles.—Monday, Wednesday, and Friday, 1 to 3. Mr. Murphy.

Physical culture.

Three themes.

Second Term:

Calculus.—Every day, at 8. Professor Miller.

Physics.—Every day, at 11. Professor Blake.

Surveying.—Every day, at 10. Professor Marvin.

Drawing: Topographical.—Tuesday and Thursday, 1 to 3. Mr. Murphy.

Physical culture.

Four-weeks summer course in field practice.

Three themes.

JUNIOR YEAR.*First Term:*

Elements of Mineralogy and Petrography.—Every day, at 9 to 11. Professor Haworth.

Analytical Mechanics.—Every day, at 11. Mr. Murphy.

Field Engineering.—Every day, at 3. Professor Marvin.
 Draughting.—Monday and Wednesday, 1 to 3. Mr. Murphy.
 Two forensics, or equivalent theses.

Second Term:

Practical Astronomy.—Every day, at 11. Professor Miller.
 Resistance of Materials.—Four days per week, at 10. Mr. Murphy.
 Location of Railroads.—Three-fifths term (*a*). Every day, at 9.
 Professor Marvin.
 Roads and Pavements.—Two fifths term (*b*). Every day, at 9.
 Mr. Murphy.
 Testing-Laboratory Work: Iron, Steel, and Wood.—One afternoon
 per week, Monday or Friday. Mr. Palmer.
 Draughting.—Tuesday and Thursday, 1 to 3. Mr. Murphy.
 Four-weeks summer course in field practice.
 Two forensics, or equivalent theses.

SENIOR YEAR.

First Term:

Mechanics of Fluids (*a*).—Every day, at 10. Mr. Murphy.
 Hydraulic Motors (*b*).—Every day, at 10. Mr. Murphy.
 Roofs and Bridges.—Every day, 1 to 3. Professor Marvin.
 Masonry (*b*).—Every day, at 9. Mr. Murphy.
 Sanitary Engineering (*a*).—Every day, at 11. Professor Marvin.
 Testing-Laboratory Work: Cements, Stone, and Brick.—One af-
 ternoon per week. Mr. Palmer.
 Two forensics, or equivalent theses.

Second Term:

Advanced English Composition.—Monday, Wednesday, and Fri-
 day, at 9. Professor Hopkins and Mr. O'Leary.
 Water-Supply (*a*).—Every day, at 11. Mr. Murphy.
 Specifications and Contracts (*b*).—Every day, at 11. Professor
 Marvin.
 Engineering Design.—Every day, 1 to 3. Professor Marvin.
 Professional thesis.

Course in Electrical Engineering.

FRESHMAN YEAR.

First Term:

Algebra (*a*) and Plane Trigonometry (*b*).—Every day, at 8, 9, 10,
 and 11. Professor Miller, Professor Newson, and Mr. Rice.
 English *B I*.—Every day, at 8 or 11. Mr. Jones and assistant.
 Scientific French.—Every day, at 11. Miss Galloo.
 Free-Hand Drawing.—Monday or Thursday, 1 to 3. Mr. Palmer.
 Geometrical Drawing and Lettering.—Two afternoons per week,
 Tuesday, Wednesday, or Friday, 1 to 3. Mr. Palmer.
 Shop practice, one-half day per week.

Second Term:

Spherical Trigonometry (a).—Every day, at 8, 9, and 10. Professor Miller, Professor Newson, and Mr. Rice.

General Chemistry.—Every day, at 8 or 10. Professor Bailey.

Descriptive Geometry.—Every day, at 9. Mr. Palmer.

Scientific German.—Every day, at 8. Mr. Engel.

Drawing: Descriptive Geometry—Plates.—Two days, Tuesday, Wednesday, or Thursday, 1 to 3. Mr. Palmer.

Shop practice, one-half day per week.

SOPHOMORE YEAR.

First Term:

Physics: Mechanics, Electricity, and Magnetism.—Lectures four days a week, at 11, and laboratory practice one afternoon a week, from 2 to 5. Professor Blake and Mr. Rice.

Analytical Geometry.—Every day, at 8. Professor Newson.

Chemistry.—Every day, 9 to 11. Professor Bailey and Mr. Bartow.

Drawing: Machine Drawing.—Two afternoons per week, Monday, Tuesday, or Wednesday, 3 to 5. Mr. Palmer.

Shop practice, one-half day per week.

Physical culture.

Three themes.

Second Term:

Calculus.—Every day, at 8. Professor Newson.

Physics: Sound, Heat, and Light.—Lectures four days a week, at 11, and laboratory practice one afternoon a week, from 2 to 5. Professor Blake and Mr. Rice.

Dynamo-Electric Machinery: Theory and Design of Direct-Current Generators and Motors.—Every day, at 9. Mr. Dunstan.

Drawing: Machine Designing.—Lectures and drawing, Tuesday and Thursday, 3 to 5. Mr. Palmer.

Shop practice, one-half day a week.

Physical culture.

Three themes.

JUNIOR YEAR.

First Term:

Analytical Mechanics.—Every day, at 11. Mr. Murphy.

Theory of Electricity and Magnetism.—Mathematical development of the fundamental principles of electrostatics, magnetism, and direct currents of constant E. M. F., with special reference to their variable stage. Every day, at 1. Professor Blake.

Differential Equations.—Monday, Wednesday, and Friday, at 10. Professor Newson.

Laboratory practice, two afternoons a week.—Accurate measurements of resistances, electromotive force, determination of instrument constants and magnetization curves. During the

term each student may be required to design and construct some delicate electrical measuring instrument. Professor Blake.

Two forensics, or equivalent theses.

Shop practice, one-half day a week.

Electrical Seminary.—Once a week.

Second Term:

Resistance of Materials.—Four days a week, at 10. Mr. Murphy.

Testing-Laboratory Work.—One afternoon a week.

Theory of Alternating Currents.—Development of the general equations in circuits containing resistance, self-induction and capacity. This course is intended to develop the mathematical treatment of single-phase-current phenomena. Every day, at 1. Professor Blake.

Steam Engines and Boilers:

A.—A critical study of types, comprising simple and multiple expansion engines, both land and marine, with their accessories, air- and circulating-pumps and condensers. The object of this course is to present a comprehensive view of prime movers for electrical purposes. This study is introductory to the broad subject of thermodynamics. Mr. Dunstan.

B.—Boiler Setting: Erection of engines and machinery; construction and repairing of engines and shaftings; setting valves with and without indicator; pumps and injectors; steam and water piping; friction clutches; pulleys and belting; running of plants. Recitations and lectures. Daily, at 11. Mr. Ward.

Laboratory work, two afternoons per week.—Measurement of electrolytic and insulation resistances, capacities, and inductances; characteristic curves of direct-current generators and motors; instantaneous values of E. M. F. and current in single-phase generators. Design and construction of some minor laboratory instruments. Professor Blake.

Two forensics, or equivalent theses.

Shop Practice, one-half day a week.

Electrical Seminary.—Once a week.

SENIOR YEAR.

First Term:

Thermodynamics of Gases, Saturated and Superheated Vapors.—

Theory of the steam and other heat engines. Engine and boiler testing, including Hirn's analysis. Every day, at 11. Mr. Dunstan.

Alternating-Current Machinery.—This course takes up in detail the design and construction of alternators, transformers, and alternating-current motors. Special attention is given to the subject of power transmission by polyphasal currents. Every day, at 11. Mr. Rice.

Laboratory work.—Experimental study of the transformer.

Two afternoons a week. Mr. Dunstan.

Chemistry of the Metals (*a*)—Every day, at 8. Professor Bailey and Professor Franklin.

Chemical Physics (*b*)—Every day, at 8. Professor Franklin.

Machine practice in construction or testing of some commercial electrical appliance.

One week in fire room and one week in engine-room are required of each student for practice in the proper care and handling of boilers and engines.

Two forensics, or equivalent theses.

Electrical Seminary.—Once a week.

Second Term:

Specifications and Contracts.—2d term (*b*). Every day, at 11. Professor Marvin.

Alternating Current Machinery (continued).—Every day. Mr. Rice.

Advanced English Composition.—Monday, Wednesday, and Friday, at 9. Professor Hopkins and Mr. Jones.

Electrical Seminary.—Once a week.

Preparation of thesis based upon student's own work.

During the term, occasional lectures upon the application of electricity to special purposes will be given by Professor Blake and Mr. Dunstan.

Course in Hydraulic and Sanitary Engineering.

FRESHMAN AND SOPHOMORE YEARS.

Same as the course in civil engineering.

JUNIOR YEAR.

First Term:

Same as the course in civil engineering.

Second Term:

Resistance of Materials.—Four days a week, at 10. Mr. Murphy.

Economic Geology (*a*).—Every day, at 11. Professor Haworth.

Bacteriology (*b*).—Every day. Mr. Barber.

Water and Soil Analysis.—Every day, 3 to 5. Professor Bailey.

Testing Laboratory (iron, steel, and wood).—One afternoon a week, Monday or Friday. Mr. Palmer.

Draughting.—Tuesday and Thursday, 1 to 3. Mr. Murphy.

Two forensics, or equivalent theses.

Four-weeks summer course in field practice.

SENIOR YEAR.

First Term:

Mechanics of Fluids (*a*).—Every day, at 10. Mr. Murphy.

Hydraulic Motors (*b*).—Every day, at 10. Mr. Murphy.

Sanitary Engineering.—Every day, at 11. Professor Marvin.

Masonry (*b*).—Every day, at 9. Mr. Murphy.

Hydraulic Field Work (*a*). Mr. Murphy.

Testing Laboratory (cement, stone, and brick).—One afternoon a week. Mr. Palmer.

Two forensics, or equivalent theses.

Second Term:

Advanced English Composition.—Monday, Wednesday, and Friday, at 9. Professor Hopkins and Mr. O'Leary.

Water-Supply (*a*).—Every day, at 11. Mr. Murphy.

Specifications and Contracts (*b*).—Every day, at 11. Professor Marvin.

Irrigation Engineering.—Every day, at 3. Mr. Murphy.

Professional thesis.

Course in Chemical Engineering.

In the Freshman year the course is the same as the civil engineering, except that summer field practice is not required of the chemical engineers.

SOPHOMORE YEAR.

First Term:

Analytical Geometry.—Every day, at 8. Professor Newson.

Physics.—Four days a week, at 11. Laboratory practice, one afternoon a week. Professor Blake.

Qualitative Analysis.—Every day, from 9 to 11. Professor Bailey and Mr. Bartow.

Physical culture.

Three themes.

Second Term:

Botany.—Every day, from 9 to 11. Professor Stevens and Mr. Barber.

Physics.—Four days a week, at 11. Laboratory practice, one afternoon a week. Professor Blake.

Calculus.—Every day, at 8. Professor Miller.

Physical culture.

Three themes.

JUNIOR YEAR.

First Term:

Quantitative Analysis.—Every day, from 2 to 5. Professor Bailey.

Mineralogy and Petrography.—Every day, from 9 to 11. Professor Haworth.

Analytical Mechanics.—Every day, at 11. Mr. Murphy.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

Second Term:

Economic Geology (*a*).—Every day, at 11. Professor Haworth.

Inorganic Preparations (*b*).—Every day, from 8 to 10. Professor Bailey.

Organic Chemistry.—Monday, Wednesday, and Friday, from 1 to 3, with laboratory practice on Tuesday and Thursday afternoons. Professor Franklin.

Resistance of Materials.—Four days a week, at 10. Mr. Murphy.
Testing-Laboratory Work (iron, steel, and wood).—One afternoon a week, Monday or Friday, from 2 to 5. Mr. Palmer.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

SENIOR YEAR.

First Term :

Metallurgy (*a*).—Every day, at 11. Professor Bailey.

Chemical Technology (*b*).—Every day, at 11. Professor Bailey.

Sanitary and Applied Chemistry.—At the convenience of the instructor and student. Professor Bailey.

Optionals: Either sugar analysis, gas analysis, iron and steel analysis, or organic preparations. Every afternoon. Professors Bailey and Franklin.

Chemical Seminary.—Every Thursday, at 4.

Two forensics, or equivalent theses.

Second Term :

Advanced English Composition.—Every day, at 9. Professor Hopkins and Mr. Jones.

Analysis of Soils, Fertilizers, Waters, and Foods.—Every afternoon. Professor Bailey.

Assaying (*a*).—Every day, from 10 to 12. Professor Franklin.

Preparation of thesis (*b*).

Chemical Seminary.—Every Thursday, at 4.

The Graduate School.

FACULTY.

F. H. SNOW, *President*,
Botany and Entomology.

F. W. BLACKMAR, *Dean*,
History and Sociology.

E. MILLER,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

F. O. MARVIN,
Civil Engineering.

E. H. S. BAILEY,
Chemistry and Metallurgy.

A. M. WILCOX,
Greek.

L. E. SAYRE,
Pharmacy.

A. G. CANFIELD,
French.

L. I. BLAKE,
Physics.

C. G. DUNLAP,
English.

G. B. PENNY,
Voice Training, Harmony, Musical Composition.

S. W. WILLISTON,

Historical Geology and Paleontology.

OLIN TEMPLIN,

Philosophy.

F. H. HODDER, *Secretary*,

American History and Administration.

E. M. HOPKINS,

English.

E. HAWORTH,

Physical Geology and Mineralogy.

A. T. WALKER,

Latin.

H. B. NEWSON,

Mathematics.

W. C. STEVENS,

Botany.

E. D. ADAMS,

History and Sociology.

A. S. OLIN,

Pedagogy.

E. C. FRANKLIN,

Chemistry.

S. J. HUNTER,

Entomology.

The Graduate School.

The Graduate School provides for all instruction in advanced University studies, under the charge of the Graduate Faculty and its administrative committee, of which the Dean is chairman. It is the business of this Faculty to formulate courses in graduate work, to establish and maintain the requirements for all higher degrees offered by this University; to make recommendations for those degrees to the Board of Regents; and to fix such regulations as they may deem expedient for the government of the school.

Admission to the Graduate School ordinarily is granted to graduates of this University holding the bachelor's degree, and to graduates of other colleges and universities of good standing on presentation of proper evidence of scholarship and testimonials of good character. Applications for admission must be filed on the proper blanks in the office of the Dean of the school, and must be accompanied by an outline of the work proposed to be undertaken as approved by the heads of the departments concerned. Such applications will be received at any time, though it is recommended that work should begin at the beginning of the college year. Upon approval of the application by the administrative committee, a card will be issued to the applicant permitting him to register in the office of the Registrar.

Graduate students are classified as resident and non-resident, but admission to the Graduate School does not necessarily imply candidacy for a degree.

Resident students, whether candidates for a degree or not, must be in regular attendance on such course or courses as may have been selected and approved, and will be required to pass all examinations, or to submit to such other regulations and requirements as may be imposed by the heads of the departments concerned. Graduate students who pursue their work in part elsewhere must conform to the requirements imposed in each case by the administrative committee.

The University offers at present six advanced degrees, viz.: Doctor of philosophy, master of arts, master of science, civil engineer, electrical engineer, and analytical chemist. The requirement of time named in each case is the minimum for baccalaureate graduates of this University and of other colleges and universities whose degrees are accepted by this University as equivalent to its own. All admitted with a standing inferior to this must spend such additional period of time to make good the deficiency as may be fixed by the administrative committee.

Degree of Ph. D.

The degree of doctor of philosophy will be granted on the ground of advanced scholarship and the performance of independent work in some special line, under the following conditions:

1. The candidate must be a baccalaureate graduate of this University or of a college or university whose degrees are accepted as equivalent to its own; or he must give satisfactory evidence to the Faculty of the Graduate School that he possesses an equivalent preparation for graduate work.

2. He must make application to the Dean of the Graduate School before the first day of October preceding the commencement at which he intends to present himself for the degree, and must then give satisfactory evidence of his ability to read such German and French as may be necessary for the proper prosecution of his studies.

3. He must have spent at least three full college years in resident graduate work at this or some other approved university; the last year must be spent as a resident student of this University. The time spent in attaining the degree of A. M. may be counted toward satisfying this time condition.

4. He must present a thesis showing the results of original research of a high character, and must pass acceptable examinations, both written and oral, in one chief or major study and two allied, subsidiary or minor studies, not more than two of which may be in the same department. The oral examination shall be before the Faculty of the Graduate School, where he may be required to defend his thesis. The thesis, embodying the results of original research in some subject connected with his major study, must be presented to the head of the department in which the work was done not later than the first of May preceding the commencement at which the degree is to be conferred, and if approved by him shall be placed on file for inspection in the office of the Dean of the Graduate School for at least two weeks. If finally approved, not less than 100 printed copies must be delivered to the Librarian of the University before graduation, or proper security be given for the printing of that number; provided that, if the thesis has already been printed, ten copies only shall be deposited with the Librarian.

The Master's Degree.

The degree of master of arts or master of science will be granted only after at least one full year's resident graduate work. The candidate must have completed with high credit six full courses or their equivalent chosen from the courses of graduate study; other courses may be offered only by the special consent of the departments concerned and with the approval of the administrative committee; but courses for which a professional certificate or diploma is given will not be counted toward this degree. Work may be confined to a single department and may not be distributed among more than three. Not later than the 15th of May preceding the commencement at which the degree is to be taken, he must present to the head of the department in which his chief study has been, a thesis which must embody some scholarly research on some topic connected with that study.

Engineering Degrees.

Graduates in engineering of this University, and masters of science who have received their degrees through the Graduate Faculty, are eligible to the professional degrees of civil engineer or electrical engineer, whichever is appropriate to the undergraduate course taken. Candidates for these degrees must have spent at least three years' actual time in professional practice, in positions of responsibility, in the design, construction or operation of engineering works, and must

furnish detailed and satisfactory evidence as to the nature and extent of this practice.

They must submit an engineering thesis, accompanied by detailed explanations, drawings, specifications, estimates, etc., and embodying the results of their own work or observation. If approved, the thesis and all accompanying material shall be the property of the University.

All theses for any degree must be delivered to the Dean of the School of Engineering on or before the 15th day of May.

For further information address the Registrar.

Courses of Graduate Study.

Courses marked with an asterisk are undergraduate courses, but somewhat more extended work is expected of the graduate students choosing them.

Botany and Entomology.

XI. Structure and Development of Cryptogams.—Bacteria or any group may be made a special study. By appointment, every day throughout the year. Mr. Barber.

XII. Morphology and Physiology of the Plant Cell.—By appointment, every day throughout the year. Professor Stevens. Candidates for this course must be able to read French and German.

VI. Morphology and Taxonomy of Insects.—Students desiring to take this course must have completed courses I and II, or their equivalents. A thesis embodying results of investigations required at termination of work. Mr. Hunter.

Zoölogy and Anatomy.

*IV. Histology, or Microscopic Anatomy.—Lectures and laboratory work. 2d term. Every day, from 3 to 5. Open to students who have taken course I, or comparative anatomy, course III. Piersol's Normal Histology. Mr. McClung.

*V. Cytology, or Cellular Biology.—Lectures and laboratory work. 2d term. By appointment. Open to students who have taken course IV. Mr. McClung.

VI. Embryology—the Ontogeny of the Chick, Shark, etc.—1st term. By appointment. Must be preceded by course IV. Foster and Balfour's Elements of Embryology. Mr. McClung.

VII. Advanced original work in courses II, III, IV, V, or VI. Students electing original work in IV, V or VI must be able to read French and German. By appointment. Professor Dyche or Mr. McClung.

Historical Geology and Vertebrate Anatomy.

Graduate work in this department is, for the present, restricted to vertebrate paleontology.

* II. Systematic Paleontology.—Lectures and laboratory work. Zittel's Handbook. 2d term. Every day, at 4. Professor Williston.

This course may be taken as a major study for the master's degree, but must be supplemented by additional reading and laboratory work, equivalent to one full term's work. It will be required of all candidates for the doctor's degree in preparation for special work. The course is largely based upon the museum collections.

V. Special Work in Paleontology.—Throughout the year, by appointment. Professor Williston.

This course is research work in some topic in paleontology, with the necessary study of living forms, the nature of which must depend largely upon the special preparation of the student and the facilities of the department. Candidates for either degree may take this work, but the requirements and extent of the work for the doctor's degree will be much greater than for the master's degree. Students before entering upon this work must have satisfactorily pursued studies in the elements of physical and historical geology, zoölogy, vertebrate anatomy, and have taken the general systematic course in paleontology.

VI. Field Work in Paleontology.—Students who are sufficiently prepared may be invited to accompany the head of the department in field expeditions; or they may pursue, under the general direction of their instructor, in these special fields the kind of field work for which they have proper preparation. Professor Williston.

Physical Geology, Mineralogy, and Petrography.

VI. Advanced Mineralogy.—Lectures and laboratory work. For students who have completed I and II, or their equivalent. 1st term, and 2d term (*a*). By appointment. Professor Haworth.

VII. Advanced Petrography.—Lectures and laboratory work. For students who have completed I and III, or their equivalent. 1st term, and 2d term (*a*). By appointment. Professor Haworth.

VIII. Dynamic Geology.—Daily lectures. This course is adapted for advanced students only, especially those who are preparing themselves for teachers of geology. 1st term, and 2d term (*a*). By appointment. Professor Haworth.

IX. Field Work in Geology, Mineralogy, and Petrography.—For advanced students only. At present, work in geology will be confined to Kansas, but work in the other branches may be done elsewhere. Each student will be given a special area or problem to investigate, under the advice and assistance of the head of the department. Such field work, if sufficiently meritorious, will be

credited as equal to one study pursued in the University for double the length of time actually spent in the field. Spring term (b) and summer months. Professor Haworth.

Chemistry.

* XII. Organic Preparations.—Laboratory work in organic chemistry. Every day. 1st or 2d term. Mr. Bartow. This course must be preceded by chemistry IX.

* XVI.—Introductory Physical Chemistry.—1st term. Recitations and laboratory work. Three times a week. Professor Franklin.

XVII. History of Chemistry and of the Development of Chemical Theories.—1st term. Three times a week. Professor Franklin.

XVIII. Inorganic Preparations.—Laboratory work. By appointment. 1st or 2d term. Professor Bailey.

XIX. Research Course in Analytical Chemistry.—By appointment. Professor Bailey.

XX. Research Course in Organic Chemistry.—By appointment. Mr. Bartow.

XXI. Research Course in Physical Chemistry.—By appointment. Professor Franklin.

Before being admitted as candidates for advanced degrees in these courses, students must have taken the chemistry of the Freshman and Sophomore years, and not less than three of the optional courses offered in the department of chemistry, or their equivalents.

Civil and Mechanical Engineering.

Courses I to XVIII inclusive are open to candidates for the degree of M. A. Courses XIV to XXIII inclusive are open to candidates for the degree of M. S.

* I. Analytical Mechanics.—Must be preceded by calculus. 1st term. Every day, at 11. Mr. Murphy.

* II. Resistance of Materials.—Must be preceded by course I. 2d term. Four days, at 10, with one afternoon in the testing laboratory. Mr. Murphy and Mr. Palmer.

* III. Mechanics of Fluids.—Must be preceded by course I. 1st term (a). Every day, at 10. Mr. Murphy.

* IV and * V. Roofs and Bridges and Elementary Designing.—10 hours per week, throughout the year. 1 to 3. Professor Marvin. Must have been preceded by course II.

* VII. Railway Surveying.—This course must be preceded by a general course in surveying. 1st term. Every day, at 3. Professor Marvin.

* X. Sanitary Engineering.—The removal and disposal of sewage by various methods. Water-carriage and pneumatic systems. Sep-

arate and combined systems. The construction of sewers, outfalls, and flushing appliances. The ventilation of sewers. Treatment of sewage. The collection and disposal of garbage and other refuse. Garbage destruction. Utilization of refuse. Street cleaning. 1st term. Every day, at 11. Professor Marvin.

XIV. Geodesy.—Methods of conducting geodetic surveys. Station signals and their location. Angle measurement. Base work. Determination of latitude, longitude, time, and azimuth. Instrumental constants. Leveling by vertical angles. Precise leveling. Adjustment of observations. Figure of the earth. This course must be preceded by surveying and calculus. 1st term. Lectures and recitations. Professor Marvin.

XV. Advanced Course in Sanitary Engineering.—The public health. Contagious diseases and methods for destroying them. Bacteriological methods as applied to sanitary work. Influence of sanitary works on public health. Effect of different soils on drainage of cities and towns and the healthfulness of dwellings. House drainage, plumbing, and plumbing fixtures. Ventilation and heating of dwellings and public buildings. Water-supply from a sanitary standpoint. The purification of water. This course must be preceded by course X. 2d term. Lectures, recitations, and reading. Professor Marvin.

XVI. Materials of Engineering Construction.—Their action under different forms of stress. Methods of manufacture. Testing machines and methods. Properties of materials as determined from physical tests. This course must be preceded by course II. 1st term. Lectures and recitations, with laboratory work. Professor Marvin.

XVII. Advanced Course in Structural Design.—Cantilever, swing and suspension bridges. Skeleton frames for buildings. Train-shed roofs. Stand-pipes and elevated tanks. This course must be preceded by course V. 2d term. Lectures, recitations, and detailed designing. Professor Marvin.

XVIII. Advanced Course in Hydraulics.—Flow of water through pipes and orifices and in open channels and rivers. Improvements of harbors and tidal rivers. Navigation passes, dams, locks, jetties, dykes, and dredging. Must be preceded by course III. 2d term. Lectures and recitations. Mr. Murphy.

XIX. Advanced Course in Graphical Statics.—Graphics of trusses, continuous girders, stone and metal arches. Must be preceded by course I. 1st term. Recitations and problems. Mr. Murphy.

XX. Inventional Designing.—Devising of mechanisms to meet given requirements. Simple and effective arrangements of parts. Proportioning of parts and construction of working drawings. This course requires a knowledge of the principles of mechanism and ma-

chine drawing and designing. 1st term. Three hours twice a week. Mr. Palmer.

XXI. Mechanical Engineering of Power Plants.—Mechanisms of engines. Classification of engines and a study of types. Engine accessories. Valves and valve gearing. Governors for steam-engines. Engine foundations. Engine details, from the standpoint of the designer. Engine connections. The steam-boiler, its construction, setting, and appliances. Care and management of boilers. Study of fuels and combustion. Inspecting and testing. Efficiency tests of power plants. Location and plans for power plants. This course requires a knowledge of thermodynamics and machine designing. Every day throughout the year. Mr. Palmer.

XXII. Engineering Designing.—Engine and boiler designing. To be taken only in connection with course XXI. 2d term. 3 hours, twice a week. Mr. Palmer.

XXIII. Locomotive Machinery.—Construction, management, and designing. 2 hours per week, throughout the year. Mr. Palmer.

Physics and Electrical Engineering.

* III. Theory of Light.—An advanced experimental study of the phenomena of velocity, refraction, double refraction, polarization, interference, and dispersion, together with the mathematical treatment necessary for the understanding of modern methods and apparatus employed. Either term. Daily, at convenience of instructor. Mr. Rice.

* IV. Electric Oscillations.—Deduction and use of Maxwell's and Hertz's equations of the electromagnetic field, electromagnetic theory of light, and a critical study of the work of Hertz and his successors. Either term. Every day, at convenience of instructor. Mr. Dunstan.

* V. Thermodynamics of Gases, Saturated and Superheated Vapors.—Theory of the steam and other heat engines. Engine and boiler testing, including Hirn's Analysis. First term. Every day, at 11. Mr. Dunstan.

* VII. Theory of Electricity and Magnetism.—Mathematical development of the fundamental principles of electrostatics, magnetism, and direct currents of constant E. M. F., with special reference to their variable stage. First term. Every day, at 1. Professor Blake.

* VIII. Theory of Alternating Currents.—Development of the general equations in circuits containing resistance, self-induction, and capacity. This course is intended to develop the mathematical treatment of single-phase-current phenomena. Second term. Every day, at 1. Professor Blake.

Mathematics.

All students proposing to do graduate work in mathematics must have previously taken the undergraduate courses I, II, III, and IV.

* V. Modern Geometry.—Scott. 2d term. Every day, at 11. Professor Newson.

* VI. Theory of Equations.—Burnside and Panton. 1st term. Every day, by appointment. Professor Miller.

* VII. Advanced Calculus.—Williamson. 2d term. Every day, at 10. Professor Miller.

* VIII. Differential Equations.—1st term. Every day, at 11. Professor Newson.

Courses V and VI are given in alternate years with courses VII and VIII. V and VI will be given in 1898-'99.

IX. Quaternions.—Hardy. 1st term. Every day, by appointment. Professor Miller.

X. Theory of Functions.—Based on Forsyth's Theory of Functions, with supplementary reading. Arranged for either one term or two terms, according to the needs of the student. The longer course will include elliptic, Abelian and automorphic functions. By appointment. Professor Newson.

XI. Advanced Geometry.—Higher plane curves; curves of the third and fourth order, and of the third and fourth class; and the analytic geometry of the straight line in space, the plane, and the conicoids. Arranged for courses of one term, or of two terms, as may be found desirable. By appointment. Professor Miller.

XII. Theory of Numbers.—Ordinary and complex whole numbers, residues of powers, and quadratic forms. 4 hours per week, at 8. 1st term. Professor Miller.

XIII. Theory of Substitutions.—Groups, Abelian equations, and equations of the fifth degree. 4 hours per week, at 3. 2d term. Professor Newson.

The following courses are by appointment:

XIV. Absolute Geometry.—Non-Euclidean. Professor Miller.

XV. Spherical Harmonics.—Professor Newson.

XVI. Logic of Mathematics.—Professor Miller.

Philosophy.

* II. Experimental Psychology.—1st term. Every day, at 3. Professor Templin.

* III. Ethics.—1st term. Every day, at 2. Professor Templin.

* IV. History of Philosophy.—2d term. Every day, at 11. Professor Templin.

* V. Advanced Logic.—2d term (*a*). Every day, at 9. Professor Templin.

* VI. Metaphysics.—2d term (*b*). Every day, at 9. Professor Templin.

* VII. *Æsthetics*.—1st term (*b*). Every day, at 4. Professor Templin.

VIII. Advanced Psychology.—A laboratory course consisting of special work in psychological research conducted by the student under the direction of the instructor. It must be preceded by course II, and may be pursued during either or both terms. By appointment. Professor Templin.

IX. Modern Philosophy.—An advanced course in German or English philosophy adapted to the special need of applicants. It includes a critical study of the chief works of the philosophers, preparation of theses, and conferences with the instructor. It must be preceded by courses III, IV, V, and VI. By appointment. Professor Templin.

Economics and Sociology.

The courses of study leading to the degree of M. A. are essentially an elaboration of the undergraduate courses offered as Junior and Senior optionals. There are two main groups of studies offered in economics and sociology respectively. In the former group are found extended courses of the undergraduate studies of the second year and the last half of the first year in economics. In the latter are extended courses in the first year's work in sociology. Each student is given a special course of study under one or more of the following titles; he may be required to attend the recitations in the undergraduate classes.

Economics.

II. Money and Banking, including Monetary Problems and the History and Theory of Banking. Professor Blackmar.

III. The Principles of Taxation and Finance. Professor Blackmar.

IV. Economic History and Theory, with Industrial History. Professor Blackmar.

V. Unsettled Questions in Economics, including a Study in Taxation, Land and Railroad Statistics. Professor Blackmar.

Sociology.

VI. Principles of Sociology, Dynamic and Descriptive, with introductory work in Ancient Society and the History of Civilization. Professor Blackmar.

VII. Social Pathology, including Criminology, Charities and Correction, and Social Problems. Professor Blackmar.

VIII. Advanced Course in Sociology, including Racial Statistics. Professor Blackmar.

Courses leading to the degree of Ph. D. will be prepared for each applicant along the lines indicated below. These suggested lines imply individual research on the part of the student under the direction of the professor in charge.

A.—Economics.

- (a) History and Theory of Political Economy. Professor Blackmar.
- (b) Taxation and Public Finance. Professor Blackmar.
- (c) Corporations and Monopolies. Professor Blackmar.
- (d) Economics of Agriculture, and Land Tenures. Professor Blackmar.

B.—Sociology.

- (a) Anthropology. Professor Blackmar.
- (b) Principles and Theories of Sociology. Professor Blackmar.
- (c) Social Pathology. Professor Blackmar.
- (d) Special Studies in American and European Charities. Professor Blackmar.

An economic seminary will be conducted throughout the year for all advanced students.

European History.

Studies are open to those who have taken undergraduate courses in English, French and German history, or who can pass examination in these topics.

* I. Comparative Constitutional Law.—1st term. Every day, at 11. Professor Adams. Includes the optional course for undergraduates entitled "History of Institutions." In addition, graduates will undertake a critical study of existing constitutions and fundamental laws of European nations.

* II. Political History of Modern Europe (1792 to present time).—2d term. Every day, at 11. Professor Adams. Includes optional course for undergraduates of same title. In addition, graduates will select some treaty-making period in the course for special study. Map work and historical geography a specialty.

III. English Constitutional History.—2d term. By appointment. Professor Adams. Study of the principal authorities, with special work and thesis on some selected topic.

IV. Epochs of French History.—1st term. By appointment. Professor Adams. For students who can read French readily. Selection of special epoch as topic and study of French authorities.

American History and Administration.

* V. Presidential Administrations—Washington to Jackson.—1st term, at 3. Must be preceded by undergraduate course III. Professor Hodder.

* VI. Presidential Administrations—Jackson to Lincoln.—2d term, at 3. Continuation of course V. Professor Hodder.

VII. Constitutional Law—Thayer's Cases.—1st term, at 4. Professor Hodder.

VIII. International Law—Hall's International Law and Snow's Cases.—2d term, at 4. Professor Hodder.

IX. American Historical Seminary.—Open to students who have passed courses V and VI. Hours by appointment. Professor Hodder.

Greek.

* VII. Aristophanes: Clouds, Acharnians, Frogs, and Birds.—Lectures and private reading on comedy and Attic history. 1st term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1898-'99. Professor Wilcox.

* VIII. Homer's Iliad.—Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 2d term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1898-'99. Professor Wilcox.

Latin.

* V, * VI, * VII, * VIII. Seminary: Advanced work in Latin.—1st and 2d terms. Every day, at 8 or 1. Professor Walker.

X, XI. Reading and Seminary in Roman Historians.—Lectures once a week throughout the year on Roman state antiquities. Open only to such graduate students as desire a second course in Latin. If only one course is desired, it must be * VII, * VIII. 1st and 2d terms. Hour by appointment. Professor Walker.

German.

* VII. German Literature of the Eighteenth Century.—Lectures, with reading of masterpieces out of class, with comment on more difficult works in class. Essays and criticisms by members of the class. Klopstock, Wieland, Lessing, Herder. 1st term. Every day, at 11. Open only to students who have had German III, IV. Professor Carruth.

* VIII. German Literature of the Eighteenth Century (continued).—Goethe, Schiller, and the close of the century. 2d term. Every day, at 11. Professor Carruth.

* IX. German Historical Novels: Hauff, Scheffel, etc.—Careful reading in class of one work by each author, others rapidly outside. Lectures on the history of the novel and on methods and schools in fiction. Theses on separate authors and on the whole course, by members of the class. 1st term. Every day, at 11. Professor Carruth.

* X. German Historical Novels (continued): Freytag, Dahn, etc.—2d term. Every day, at 11. Professor Carruth.

* XIII. Gothic.—Phonetics and introduction to Germanic philology. 1st term. Every day, at 10. Professor Carruth.

* XIV. Luther.—Reading and grammatical study of the German literature of the Reformation. 2d term. Every day, at 9. Professor Carruth.

French.

* VII. The Romantic School: 1800–1835.—Origin and ideas. Chateaubriand, Lamartine, Victor Hugo, Alfred de Vigny, Alfred de Musset. 1st term. Every day, at 10. Professor Canfield.

* VIII. The Development of the Novel in this Century.—Hugo, George Sand, Balzac. The later realism. 2d term. Every day, at 10. Professor Canfield.

* X. History of French Literature.—Lectures, recitations and private readings. 2d term. Every day, at 11. Miss Galloo.

English.

A.—English Literature.

* X. Invention and Literary Criticism.—Development and theories of literary forms; practice in composition; lecture, conference, and library course; presentation of thesis required. Advanced course, open only to students who have taken English *B*, VI, and English *A*, I and II, or their equivalent, and to be preceded, if possible, by two additional courses in English *A*. 1st term. Every day, at 11. Professor Hopkins.

B.—Rhetoric and English Language.

* II. Anglo-Saxon.—Bright's Anglo-Saxon Reader. 1st term. Every day, at 9. Professor Dunlap.

* III. Anglo-Saxon.—Bright's Anglo-Saxon Reader and *Béowulf*. 2d term. Every day, at 9. Professor Dunlap.

* IV. Middle English.—Morris's Specimens of Early English, part I. Middle English grammar, philology, and phonology. Thesis required. 1st term. Every day, at 10. Professor Hopkins. Must be preceded by Anglo-Saxon and elementary German.

* V. Middle English.—Morris and Skeat's Specimens of Early English, part II. Skeat's *Piers Plowman*. The life and literature of the fourteenth century. Thesis required. 2d term. Every day, at 11. Professor Hopkins. Must be preceded by course IV.

Pharmacy.

III. Analysis of Plant Constituents (proximate analysis).—Must be preceded by qualitative and quantitative analysis and organic chemistry. 1st term. Every day, by appointment. Professor Sayre.

Pedagogy.

* VIII. Educational Theory.—A critical study of the educational doctrines found in the writings of Plato, Quintilian, Comenius, Locke, Rousseau, Herbart, and Spencer. Reports, discussions, and special studies. 1st term. Every day, at 10. Professor Olin.

* X. Problems of Organization, Management and Method in School Systems.—Library work, reports, and discussions. 2d term. Every day, at 10. Professor Olin.

* XI. (a) Comparative Study of Educational Systems.—Lectures, conferences, and special studies. (b) Philosophy of Education.—Library work and discussions. Work mainly based on Rosenkranz, Bain, Sully, and Compayré. 1st term. Every day, at 4. Professor Olin.

Attendance on the weekly pedagogical conference is required of graduate students in pedagogy. Lectures, special studies, and discussions.

Music.

I. Contrapuntal Harmony.—Chord construction, chord relationship, chord progressions. Monday and Thursday throughout the year, at 11. Professor Penny.

II. Musical Composition.—For those who have had I. Monday and Thursday throughout the year, at 9. Professor Penny.

III. History of the Fine Arts.—Two hours a week throughout the year. Professor Penny.

University Extension.

The University of Kansas recognizes University Extension work as an appropriate part of its services. The importance and success of University Extension has been proven by repeated experiments in England and America. Such institutions as Johns Hopkins, Yale, the University of Pennsylvania, the University of Indiana, the University of Wisconsin and the Chicago University make University Extension a part of their regular work.

University Extension is simply university teaching carried on outside of the University. Its purpose is to give instruction to those who have been denied the privileges of regular university training, and to enable those who have begun university courses to continue them under the direction of university instructors. In short, University Extension is for the express benefit of those who are unable to attend the University.

The instructors of the University have been in the habit of giving, from time to time, when asked by the public, single lectures in different parts of the state. University Extension groups these single lectures about a special topic, and aims to give organic instruction upon it. It will thus be seen that the work is in accordance with the spirit and practice of the University of Kansas.

The following thirty-four courses of University Extension lectures are offered by the University of Kansas to communities desiring them. The lectures are prepared with a view to continuous study of a given subject, and for solid instruction rather than entertainment alone. They include readings, conferences, and examinations, and are open to all persons who form themselves into a class. At the close of every course an examination is given to the members of the class who may desire it.

Persons who hold the degree of bachelor of arts from the University of Kansas, or from other institutions of equal rank with it, may receive the degree of master of arts upon the satisfactory completion of nine University Extension courses of twelve lectures each. The extension lecturers shall register the courses of candidates for the second degree with the Committee on Graduate Studies, and report to it the result of all examinations. These courses shall be accompanied by such study, reading and examination as shall be prescribed by the professors in charge.

Persons not holding the bachelor's degree may receive a University Extension diploma upon the satisfactory completion of nine University Extension courses of twelve lectures each.

Work done under instructors from other institutions than the University of Kansas will be accepted upon examination for not more than four of the nine courses necessary for a degree or a diploma. This work will also be accepted as undergraduate work, a full course of University Extension being reckoned as a two-thirds term in the University. Nine twelve-lecture courses will be accepted as equivalent to one full year's work at the University.

No credit for University Extension courses will be given to students taking work in the University.

The records of all work done under the direction of the University of Kansas will be kept on file at the University.

Not more than one lecture per week will be given in any one of the following courses.

Literary and scientific clubs and associations and reading circles desiring to avail themselves of University Extension lectures should form a local association and organize a class, fixing the tuition at a rate sufficient to cover expenses.

The courses offered are as follows:

Studies in Shakspeare. By C. G. Dunlap, Litt.D.

English Literature of the Nineteenth Century. By C. G. Dunlap, Litt.D.

Political Economy. By F. W. Blackmar, Ph.D.

Money and Monetary Theories. By F. W. Blackmar, Ph.D.

Taxation and Public Finances. By F. W. Blackmar, Ph.D.

The Chemistry of Everyday Life. By E. H. S. Bailey, Ph.D.

Electricity and its Modern Applications. By L. I. Blake, Ph.D.

Heat, Light, and Sound, and their Practical Applications. By L. I. Blake, Ph.D.

German Literature (first classic period). By W. H. Carruth, Ph.D.

German Literature (second classic period). By W. H. Carruth, Ph.D.

German Literature (Faust). By W. H. Carruth, Ph.D.

Astronomy. By E. Miller, Ph.D.

Geology. By E. Haworth, Ph.D.

The Romantic School in France. By A. G. Canfield, A. M.

Development of the Novel in France. By A. G. Canfield, A. M.

Classical Greek Literature for English Readers. By A. M. Wilcox, Ph.D.

Greek Architecture and Sculpture. By A. M. Wilcox, Ph.D.

History of Music. By G. B. Penny, B. S.

Voice Training and the Art of Singing. By G. B. Penny, B. S.

Medical Chemistry and Sanitary Science. By L. E. Sayre, Ph. M.

Physiological Chemistry. By L. E. Sayre, Ph. M.

Ethics. By Olin Templin, A. M.

Psychology. By Olin Templin, A. M.

- American History. By F. H. Hodder, Ph. M.
Government of the United States. By F. H. Hodder, Ph. M.
Municipal Government. By F. H. Hodder, Ph. M.
International Law. By F. H. Hodder, Ph. M.
Roads, Streets, and Pavements. By E. C. Murphy, C. E.
American Literature. By E. M. Hopkins, Ph. D.
The German Empire. By E. D. Adams, Ph. D.
The French Revolution. By E. D. Adams, Ph. D.
Evolution. By F. H. Snow, Ph. D., LL. D.
History of Education. By A. S. Olin, A. M.
Drawing. By A. H. Clark.

Miscellaneous Information.

STUDIES.

Unless otherwise prescribed, the regular work of any student shall consist of three full studies. More or less than this amount may be taken only by permission of the Faculty.

DEPARTMENT OF PEDAGOGY.

This department of University work offers nine courses in the science and art of teaching. Aside from its general-culture value, the work of the department is intended to better prepare for their chosen profession the large number of students who take up the work of teaching immediately after graduation. Among the studies offered are the so-called professional branches, history of education, philosophy of education, school law, methods, and school management.

Chapter 132 of the Session Laws of 1893 provides that, by examination in the above-named professional subjects, University graduates may secure the state certificate, which, after three years' successful experience in teaching, becomes a life diploma, valid in all public schools of whatever grade in the state of Kansas.

Aside from the worthy recognition which is thus given to University graduates who wish to engage in educational work, there is the practical advantage which comes from intelligent investigation and discussion of educational questions, scientifically treated by the highest authorities. Students desiring to teach are especially recommended to avail themselves of this opportunity to do collegiate work, and at the same time prepare specifically for their future vocation.

By authority of the Board of Regents, a special teacher's diploma is granted to A. B., A. M. and Ph. D. graduates of the University who have taken three terms' work in the department of pedagogy and one teachers' course in some other department.

THE UNIVERSITY GEOLOGICAL SURVEY.

By enactment of the Board of Regents, March 28, 1895, and in accordance with the state law under which the University is now being administered, the University Geological Survey of Kansas was formally organized, with the Chancellor *ex officio* director; Prof. S. W.

Williston, paleontologist; Prof. Erasmus Haworth, geologist, and Prof. E. H. S. Bailey, chemist.

It is proposed to conduct a systematic geological survey of the state, including investigations along all lines of research which a liberal interpretation of the law will permit. Advanced students will find this a most helpful means of obtaining practical training in all branches of geology. Already considerable work has been accomplished, the report upon which has been published in volumes I and II of the University Geological Survey.

PHYSICAL TRAINING.

The University is glad to announce that provision has been made to afford all students an opportunity for physical training. Instructors have been secured, a large room, with baths adjoining, is fitted up with the necessary lockers and apparatus, and regular classes in physical training have been established, the woman's class under the charge of a woman instructor. Attendance on these classes is optional with Seniors and Juniors, required of Sophomores and Freshmen. Special attention is paid to the individual needs of each student, and to each are assigned such forms of exercise as seem best suited to promote health and proper physical development. In addition to the indoor work required, facilities for additional training are provided for those who desire it, or who may wish to compete for membership in University athletic teams; and such membership is open to all students who maintain a satisfactory standing in their studies.

DISCIPLINE.

That the generosity of the state may not be abused, and that perfect justice may be done all who are earnestly striving to make the best possible use of the opportunities offered, there is but a single requirement: unexceptional deportment and strict attention to University duties.

EXAMINATIONS.

Examinations, oral and written, are held as frequently as the judgment of the instructor commends, at least at the close of the work in each subject.

Absence from examination or failure in more than one-third of his work, in any one term, severs a student's connection with the University.

RECORD OF STANDING.

At the close of each term, a summary of the students' work is reported to the Registrar, for entry upon the general record. At the end of each half year, the parent or guardian of each student, or the student, if requesting it, is furnished with a copy of the entries relating to that student.

DEVOTIONAL EXERCISES.

Devotional exercises are held in University Hall every morning. All students are cordially invited to attend these exercises.

DEGREES CONFERRED ON GRADUATION.

Any student, on completing the work assigned for the Freshman, Sophomore, Junior and Senior years in the School of Arts, will receive the degree of bachelor of arts; on completing any of the courses in the School of Engineering, the degree of bachelor of science; graduates from the Law School will receive the degree of bachelor of laws; from the School of Pharmacy, the degree of pharmaceutical chemist (Ph. C.); and those from the School of Music, the degree of bachelor of music (Mus. B.)

For information concerning advanced degrees for post-graduate study, see that portion of this catalogue relating to "The Graduate School," pp. 93 to 105.

THE WILLIAM J. BRYAN PRIZE FUND.

Hon. W. J. Bryan, of Lincoln, Neb., recently gave \$250 to the University, to be used as follows: This sum is to be invested, and the yearly interest on the same is to be given that student presenting the best thesis on some one principle of our government. The details of the contest are intrusted to the Faculty of the University.

SCHOLARSHIPS.

The University offers the following scholarships, each paying \$100:

1. The D. H. Robinson Memorial Scholarship of the Alumni Association. This is an undergraduate scholarship supported by the Alumni Association, and is open to Juniors and Seniors of the Schools of Arts and Engineering. Held in 1897-'98 by W. E. Myers, of Peabody, Kan.

2. The D. H. Robinson Graduate Latin Scholarship. Held in 1897-'98 by Charles A. Katherman, Lawrence, Kan.

3. The Lawrence Citizens' Graduate Latin Scholarship.

THE EDWARD THOMPSON PRIZE.

The Edward Thompson Company, Northport, Long Island, N. Y., publishers of the "American and English Eycyclopedia of Law," offer a set of this valuable work each year to that member of the Law School presenting the best thesis on a subject assigned by the Faculty of that School.

NON-ACADEMIC WORK.

Believing that the strength and value of the University is measured by its service to the state at large, and wishing to reach as many of our citizens as possible in a helpful and stimulating way, the University authorities cordially invite all who desire to pursue special or general courses of reading and investigation to connect themselves

with the University, or to correspond with those in charge of such studies. Suggestions as to authorities, arrangements of topics, prices of books, etc., will be gladly given. Those pursuing this special work at the University will have the advantage of daily recitations, lectures, library, laboratories, etc.

All who are seeking special information or self-culture, and the highest line of citizen life and influence, should feel that, by the generosity of the state, advice and information are freely placed at their command. Personal supervision, by correspondence, will be cheerfully given to the work of reading clubs or associations for study; and an occasional visit from some member of the Faculty can be secured, when desired by such associations, on application.

LECTURES OFFERED TO KANSAS COMMUNITIES.

In order that as many people of the state as possible may receive some immediate benefit from the University as an institution established for the dissemination of learning, a large number of lectures are offered to Kansas communities by the Faculty of the University. For these lectures no charges are made beyond the actual expenses of the lecturers, when the lectures are made free to the public; but when admission is charged the lecturer will require a fee of \$5, besides expenses. For experimental lectures, or those illustrated with lantern slides, an additional fee of \$5 may be charged. These lectures are suitable for delivery under the auspices of high schools, educational, literary or religious societies. The list of lectures thus offered for the academic year 1898-'99 comprises eighty-one different subjects, and includes the names of twenty-three members of the University Faculty. All correspondence regarding these lectures should be addressed to the Chancellor of the University.

THE "KANSAS UNIVERSITY QUARTERLY."

The *Kansas University Quarterly* is maintained by the University as the medium for the publication of the results of original research by members of the University. Papers are published in it only on recommendation of the committee of publication, which committee is composed of six professors and the managing editor. The *Quarterly* is issued regularly, as indicated by its title: No. 1, Vol. 1, is dated July, 1892. Beginning with Vol. VI, the *Quarterly* has appeared in two series: *A*, science and mathematics; *B*, philology and history. Each number contains fifty or more pages of reading matter, with necessary illustrations, the four numbers of each year constituting a volume. The price of subscription is \$2 a volume, single numbers varying in price with cost of publication. Exchanges with similar publications of other colleges or universities and of learned societies are solicited. All communications regarding the *Quarterly* should be addressed to W. H. Carruth, managing editor, Lawrence.

PAPERS.

The weekly papers heretofore existing have been consolidated into one paper, *The University Weekly*. The students of the School of Law publish the *Kansas University Lawyer*, a paper devoted to the interests of that school.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

The Young Men's Christian Association is an organization composed of active Christian men of the school, banded together for the purpose of preserving and advancing the spiritual interests of the University. A gospel meeting is held every Sunday afternoon in Music Hall, at three o'clock, and a daily prayer-meeting every morning, at half past eight o'clock. Instruction is offered in the Bible by competent instructors, and a series of lectures on various topics relating to the Bible is given by members of the Faculty. A committee from the association meets new students at the trains, and will be glad to assist them in finding rooms and boarding places. There will be sent to any address, on application, a handbook giving valuable information to prospective students. Address the president of the association.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

The Young Women's Christian Association is an association of young women in the University, with aims similar to that of the Y. M. C. A. Regular meetings are held every Wednesday afternoon, at five o'clock, and the organization unites with Y. M. C. A. in the course of lectures mentioned above. Several Bible classes are conducted under the auspices of this association. An effort is also made at the beginning of the year to assist young women just entering the University in securing boarding places, and, when desired, places in homes where board may be obtained for assistance in housework.

WOMAN'S LEAGUE.

The Woman's League is an association organized to welcome the young women to the University, to aid them in securing boarding places, and to render them all other assistance in its power. It includes in its membership the women of the Faculty, the wives of members of the Faculty, and the young women students of the University. One object of this league is to promote a healthful social life among students, who are cordially invited to the homes of its members.

SOCIETIES.

Literary Societies, a Moot Senate, a German Club, a French Conversation Club, a Chemical Seminary, a Pharmaceutical Club, a Greek Symposium, a Civil Engineering Society, an Electrical Seminary and the Seminary of History and Political Science are regu-

larly organized and maintained by the students. A large number of standard periodicals, furnished by these clubs, are placed in the University reading room for the use of all students.

TERMS AND VACATIONS.

The academic year is divided into two terms of equal length, the first beginning on the first Wednesday following the 4th of September; the second ending on the first Wednesday following the 5th of June.

There are two vacations: One, the summer vacation of thirteen weeks, following the commencement, in June; the other, of two weeks, at the Christmas holidays. Besides these, Thanksgiving day and the following Friday and Monday, and Arbor day (Thursday), with the following Friday and Monday, are observed as holidays.

TUITION FREE.

Tuition is free to Kansas students in every school of the University, and no contingent or admission fee is required of inhabitants of the state.

The fees for non-residents are as follows:

School of Arts, per annum	\$10 00
School of Engineering, per annum.....	10 00
School of Law, per annum.....	25 00
School of Pharmacy, per annum.....	25 00
Preparatory Medical Course, per annum.....	25 00
School of Music, tuition per quarter.....	35 00

The fee to cover cost of material used and apparatus broken is required in advance of all students in chemistry, pharmacy, medicine, physics, natural history, and civil engineering.

A graduation fee of \$5 is required in all departments.

EXPENSES.

There are no dormitories owned or managed by the University. Students find accommodations in the boarding-houses and homes of Lawrence.

The average price of board, including rooms, light, and fuel, may be placed at \$3.50 a week. Some persons who furnish plain rooms and good, plain food, receive boarders at \$3 or even \$2.50 a week. Day board in private families and at city restaurants may be obtained for \$2.50 to \$3 a week.

Day board in clubs varies according to the economy practiced, from \$1.75 to \$2.50 a week. On this plan, a company of students appoints a steward or a committee to arrange terms with a competent housekeeper, to buy provisions as needed, to keep a list of rooms for rent in the vicinity, and to collect from the membership the cost for each week.

Furnished rooms, generally occupied by two students, cost from \$4 to \$10 a month.

The following is a fair estimate of yearly expenses :

Board, 40 weeks, at \$2 to \$3.50	\$80 00 to \$140 00
Room rent, 40 weeks, 50 cents to \$2	20 00 to 80 00
Washing	10 00 to 20 00
Books	15 00 to 30 00
Incidentals.....	15 00 to 50 00
Totals	\$140 00 to \$320 00

Those who can supply the furniture for rooms, buying and preparing the provisions for the table themselves, can thus board for very little cost in money, not a few students actually going through at an expense of \$75 per annum.

All requests for further information should be addressed to the Registrar, State University, Lawrence, Kan.

Roll of Students.

Graduate School.

CANDIDATES FOR DEGREE.

RESIDENT.

Alford, Alfred Cecil, A. B. '96, <i>History and Sociology</i> ,	Lawrence.
Anderson, Ella Marie, A. B. '98, <i>German, Sociology</i> ,	Morganville.
Ayers, Harriett Hall, A. B. '97, <i>History, English, Philosophy</i> ,	Lawrence.
Banker, Willis G., A. M. '97, <i>Sociology</i> ,	Lawrence.
Beede, Joshua William, A. B. (Washburn), <i>Paleontology</i> ,	Topeka.
Clark, Arthur W., M. D., <i>Bacteriology</i> ,	Lawrence.
Clarke, Florence Greeley, A. B. '97, <i>French</i> ,	Lawrence.
Dudley, Mary Josephine, A. B. '97, <i>English and Psychology</i> ,	Ottawa.
Faxon, Ada, A. B. '97, <i>German</i> ,	Lawrence.
Frost, Mary Elizabeth, B. S., M. L. (Knox College), <i>Latin, English, and Greek</i> ,	Topeka.
Gilbert, James Zacchæus, A. M. '95, <i>Geology, Paleontology, Chemistry, and Evolution</i> ,	N. Manchester, Ind.
Henderson, Rachel H., A. B. (Baker), <i>Pedagogy</i> ,	Clay Centre.
Irwin, Edward Payson, A. B. '97, <i>Chemistry</i> ,	Lawrence.
Johnson, Charles Edward, A. B. '96, <i>Botany, Geology, and Evolution</i> ,	Emporia.
Katherman, Charles A., A. B. '97, <i>Greek, Latin, German</i> ,	Lawrence.
Kimpton, Carl Edward, A. B. '95, <i>Sociology</i> ,	Netawaka.
Landis, Maude, A. B. '97, <i>Chemistry</i> ,	Lawrence.
Magaw, William Glenn, A. B. (Washburn), <i>Latin, Mathematics</i> ,	Topeka.
Menet, Margaret Elizabeth, A. B. '95, <i>English</i> ,	Lawrence.
Metcalf, Helen Griffin, A. B. '97, <i>English, German</i> ,	Topeka.
Morscher, Norton Lawrence, B. S. '96, <i>Geology, Electricity, Mathematics</i> ,	Neodesha.

McClung, Clarence E., A. B. '96, <i>Biology</i> ,	Lawrence.
McKeever, William A., A. B. (Campbell), <i>Eng- lish, Sociology</i> ,	Holton.
Nelson, Rasmus, A. B. (Northwestern), <i>Latin, Greek, German</i> ,	Wichita.
Popenoe, E. A., A. M. (Washburn), <i>Entom'ogy</i> ,	Topeka.
Prentice, Sydney C., A. B. '96, <i>French</i> ,	Lawrence.
Price, Ralph Ray, A. B. (Baker), <i>Sociology, American History</i> ,	Holling.
Reed, Will T., A. B. '97, <i>Sociology</i> ,	Topeka.
Rogers, George Donaldson (Rochester Theolog- ical Seminary), <i>Sociology</i> ,	Lawrence.
Shutt, Charles Edwin, A. B. '98, <i>Philosophy</i> ,	Peabody.
Spencer, May Hotchkiss, A. B. '94, <i>English, Pedagogy</i> ,	Wakarusa.
Sterling, Charles Morgan, A. B. '97, <i>Botany</i> ,	Dillon.
Stevens, George Walter, A. B. '97, <i>Paleontology, Philosophy, German</i> ,	Iola.
Thierstein, John R., A. B. '96, <i>Greek, Psy- chology, Ethics</i> ,	Brainard.
Valentine, Ralph Elmer, B. S. (Washburn), <i>Chemistry</i> ,	Topeka.
Wedel, Peter, A. B. '95, <i>Pedagogy, Geology, Anatomy</i> ,	Moundridge.
Williams, Martha Philippa, A. B. '97, <i>Greek, Latin</i> ,	Topeka.

NON-RESIDENT.

Claassen, Peter A., A. B. '96, <i>American His- tory, History and Sociology</i> ,	Winfield.
Sharpe, Charles Manford, A. B. '97, <i>Sociology, Carbondale, Ill.</i>	

NOT CANDIDATES FOR DEGREE.

Baker, James Edward,	Pomona.
Briggs, Ada Eleanor,	Lawrence.
Edwards, Isaac Franklin,	Wathena.
James, Vassie, A. B. (Vassar), <i>Sociology</i> ,	Kansas City, Mo.
Kile, Harry, A. B. (William Jewell), <i>Sociology</i> ,	La Cygne.

Graduates, 44.

School of Arts.

SENIORS.

Abel, Annie Heloise,	Salina.
Addison, Mayme,	Salina.
Anderson, Ella Marie,	Morganville.
Belcher, Charles Norton,	Enterprise.
Cavin, Alberta Ruth,	Globe.
Chaffee, Arthur Gill,	Girard.
Chamberlain, Lawrence Safford,	Topeka.
Chapman, Gertrude,	Seneca.
Cheadle, John B.,	<i>Boone, Okla.</i>
Clark, William Haskell,	<i>Warrensburg, Mo.</i>
Clock, Wilkie Clyde,	North Topeka.
Crawford, Annie Leora,	Neodesha.
Crisman, George R.,	Matfield Green.
Crocks, John Wesley,	Morse.
Criss, Nellie Vincent,	Lawrence.
Douglass, Walter Woodroe,	Colony.
Dryden, Nellie,	Mulvane.
Elliott, Philip Sheridan,	Mayetta.
Ellis, George Washington,	<i>Weston, Mo.</i>
Field, Rhoda Kidder,	Solomon.
Fiester, Lelia Ednyl,	Whiting.
Frank, Tenny,	<i>Kansas City, Mo.</i>
Gephart, Eleanor Marshall,	Valley Falls.
Glenn, Pressley Adams,	Nortonville.
Grover, Ruth Newhall,	Leavenworth.
Hall, Justus Otho,	Morse.
Hamill, Claude Emmett,	Wakarusa.
Hammers, Brice Evans,	Clear Water.
Haven, Elmer Franklin,	Belleville.
Henry, Thomas Bravois,	Independence.
Hickey, Ethel Ailene,	Lawrence.
Jackson, Arthur Page,	Centralia.
Johnson, Frank Hilliard,	Quenemo.
Kyser, William Melvin,	Grenola.
Laughlin, Irving Scott,	<i>Foster, Mo.</i>
Loomis, Charles Henry,	Tonganoxie.
Macomb, John de Navarre, jr.,	Coffeyville.
Mershon, Jennie Rebecca,	<i>Buckner, Mo.</i>
Messerley, Charles Gottlieb,	Emporia.
Miller, Anna Laura,	Peabody.
Myers, William Lewis,	El Dorado.
McCall, Bert Bernard,	Belleville.
McGregor, Mabelle Christa,	Winfield.

McKinnie, Ralph Girard,	Beloit.
McPherson, John Edward,	Blue Rapids.
Neal, Robert Wilson,	Columbus.
Neuenschwander, Elise,	Wa Keeney.
Pennington, Celia Emily,	Lawrence.
Phillips, Duff G.,	Roland.
Potts, Issie Brander,	Paola.
Radford, Agnes,	Lawrence.
Rench, William Stull,	Dighton.
Ringle, William Edgar,	Cherry Vale.
Rising, George Henry,	Salina.
Shutt, Charles Edwin,	Peabody.
Sinnott, Evangeline Mary,	Oswego.
Smith, Richard James,	<i>Kansas City, Mo</i>
Snow, Martha Boutelle,	Lawrence.
Snyder, James Rodger,	Augusta.
Souder, Alvah,	Newton.
Spencer, Alice Isabelle,	Pleasanton.
Spiers, Edward Bruce,	Lyons.
Wagner, Charles Albertis,	Horton.
Warde, Blanche,	Lawrence.
Wardner, Albert E., jr.,	<i>Kansas City, Mo.</i>
Watson, Rachel Hammond,	Lawrence.
Wickersham, Lulu,	McPherson.
Wilder, Webster,	Hiawatha.
Williams, Edward Marsh,	Burlington.
Wing, Herbert,	Newton.
Zimmerman, Minnie Ella,	Lawrence.

Seniors, 71.

JUNIORS.

Baillie, Gertrude,	Lawrence.
Baillie, Veda,	Lawrence.
Beach, George Thomas,	Havensville.
Boring, Nellie Catherine,	Osborne.
Bowen, Bertha,	Centralia.
Bromelsick, Walter Wendell,	Lawrence.
Case, Frank Elwell,	Marion.
Case, Ida May,	Norton.
Case, Stella McKenzie,	Norton.
Caughey, Catherine Margaret,	Horton.
Cloyes, John Marshall,	Lancaster.
Collins, John Henry,	Topeka.
Cooper, Walter Loring,	Winfield.
Coppedge, Robert William,	Langdon.
Cowley, Lawrence Leon,	Columbus.
Cross, Walter Martin,	Wa Keeney.
Cubine, Georgia,	Coffeyville.

Diesem, Harry Custer,	Garden City.
Dixon, Daisy,	Haskell.
Emley, Samuel Charles,	Great Bend.
Fuller, Cora Jane,	Eureka.
Graham, Walter Baber,	Brantford.
Greider, William Henry,	White Cloud.
Grimes, George,	Hiawatha.
Gwin, John Arthur,	Haddam.
Hayes, Beatrice Bertha,	Lawrence.
Hazen, Raymond Crandall,	Lawrence.
Henry, John Jacob,	Lawrence.
Hopkins, Ross,	Holton.
Hoyt, Harold Eliphalet,	<i>Cambridge, N. Y.</i>
Hudson, Andrew,	Fredonia.
Hyde, Emma,	Geneva.
Jamieson, William Culver,	Holton.
Jewett, Frank Leonard,	Olathe.
Johnson, Bessie,	Winfield.
Lofty, John,	Osage City.
Mueller, Robert Gottlieb,	Hamlin.
McClair, Charles,	Carbondale.
McCleery, John Scott,	<i>Ft. McIntosh, Tex.</i>
McCurdy, Anna Vesta,	Hutchinson.
McGee, Charles James,	Leavenworth.
Northrup, Fred Dettmar,	Kansas City.
O'Neil, Ernest Richard,	Wellsville.
Parrott, Alfred Horace,	Clay Center.
Pendleton, Ellen,	<i>College M'd, Mo.</i>
Perdue, Rosa M.,	Fort Scott.
Pieratt, James Monroe,	Strawn.
Poff, Grace Estelle,	Lawrence.
Pratt, Frank Preston,	Phillipsburg.
Riggs, Lucy Young,	Lawrence.
Rodgers, George Dick,	Topeka.
Rose, Clinton Emmet,	Concordia.
Sæds, Guy Clifford,	Garden City.
Sellards, Elias Howard,	Scranton.
Simpson, Charles Hoke,	Beloit.
Sluss, Clarence Alfred,	Wichita.
Stone, Elizabeth,	<i>Kansas City, Mo.</i>
Summerfield, Solon,	Lawrence.
Swayze, Jason Clarke,	Topeka.
Taylor, Isaac Daniel,	Hartford.
Taylor, La Monte,	<i>Kansas City, Mo.</i>
Teas, Charles Russell,	Lenexa.
Thomas, Eudora Jane,	Emporia.

Tindall, * Mary Evangeline,	Lawrence.
Walker, Cora Edith,	Eudora.
Watson, Rosalia Blanche,	Lawrence.
Wheeler, Abijah Clement,	Delphos.
Whitman, Ruth Heywood,	Wakarusa.
Zimmerman, Cornelia Virginia,	Lawrence.

Juniors, 69.

SOPHOMORES.

Adams, Leverett Allen,	Lawrence.
Babize, Laura Angelica,	Sterling.
Berns, Rosa,	Hanover.
Brown, Isabel Florence,	Norton.
Buzzi, Antonio S.,	Arkansas City.
Colman, Nellie Mabel,	Lawrence.
Combs, Rollie David,	Winfield.
Converse, Blanche Elizabeth,	Pearl.
Copeland, Cecil Edwin,	Russell.
Copley, Edward,	Junction City.
Creager, Tina Violet,	Jamestown.
Curry, James Wilson,	Winchester.
Cutter, Charlotte Varnum,	Vinland.
Dewey, Pearl,	Farlinville.
Earnest, Stella Price,	Arkansas City.
Ellsworth, Margaret Jane,	Cherry Vale.
Fanger, Mary Louise,	Girard.
Felgar, James Huston,	Newton.
Fiester, Mabel Lynde,	Whiting.
Fones, Porter Harry,	Lyons.
Francis, John, jr.,	Colony.
Gilmore, Jerome Odell,	Lawrence.
Goodnight, Lizzie Evelyn,	Frankfort.
Gray, Franklin Abe,	Phillipsburg.
Gregg, George Archie,	Eureka.
Grosh, Lulu,	Haysville.
Haven, Grace Marie,	Belleville.
Henderson, Henrietta Laura,	Iola.
Henrichs, Emma Helene,	Humboldt.
Henry, Lillie Edith,	Lawrence.
Hess, Henry Harrison,	Wichita.
Hill, Gertrude Winslow,	Wakarusa.
Housh, Addison Emmett,	Oskaloosa.
Housh, Frank Thomas,	Oskaloosa.
Irwin, Will Herbert,	Lawrence.
Kane, John Henry,	Greensburg.
Klauman, Clara Fredericka,	Iola.

* Deceased.

Klise, Clarence Eugene,	Minneapolis.
Lacey, Ellsworth Taylor,	Dillon.
Landis, May,	Lawrence.
Lee, Agnes,	<i>Kansas City, Mo.</i>
Lieberman, Jerome Sidney,	<i>Kansas City, Mo.</i>
Linton, Jessie Anna,	Junction City.
Lizberg, John Andrew,	Oberlin.
Kelley, Elmer Willard,	Frankfort.
Liscum, Fred S.,	Geneseo.
Luther, Ethel May,	Lawrence.
Maynard, Frances Bessie,	Osawatomie.
Medes, Lloyd,	<i>Kansas City, Mo.</i>
Miller, Harry Lloyd,	Perry.
Moon, Rhobe Clarisa,	Kansas City.
Morris, Mary E.,	Hiawatha.
Mueller, Madeline Minnie,	Lawrence.
Myers, Ruth,	Hiawatha.
McCaughan, Elizabeth,	Olathe.
McCrary, Virginia,	Lawrence.
McDowell, Henry Martin,	North Lawrence.
McFarland, David Ford,	Lawrence.
Parrott, Edith May,	Lawrence.
Post, Frank Anson,	Winfield.
Reynolds, Myra Lillian,	Cawker City.
Robbins, Charles Leonidas,	Russell.
Robinson, George Albert,	Lawrence.
Rothrock, Wilburn Joseph,	Lawrence.
Royal, Claude Vivian,	Oatville.
Rundle, Albert,	Clay Center.
Sellards, Mamie Watson,	Scranton.
Shinn, Lue Abbie,	Greenleaf.
Simpson, Lacey Moore,	McPherson.
Smith, Zillah Merriam,	Lawrence.
Sutton, William Black,	Russell.
Swett, Frank Wentworth,	Haskell.
Taylor, Nathaniel Earle,	Hartford.
Turner, Katie Hester,	Lawrence.
Van Hoose, Grant,	Pratt.
Vickers, Adah Maude,	Paola.
Vickers, Elizabeth May,	Paola.
Wagstaff, May Belle,	Lawrence.
Wemple, Flint Lee,	Topeka.
Wick, Clement Carlisle,	New Chillicothe.
Wolfe, Mabel Harriett,	Frankfort.

FRESHMEN.

Alford, Anna Mary,	Lawrence.
Anderson, Marian Josepha,	Chetopa.
Anderson, John Bodley,	Chetopa.
Aten, Stella Wolcott,	Hiawatha.
Ayer, Agnes Gertrude,	Blue Rapids.
Babcock, Seth,	Minneapolis.
Bailey, Herbert Stevens,	Lawrence.
Baker, Adele,	Hiawatha.
Baker, Franklin,	Lawrence.
Banks, Frank Elliott,	Lawrence.
Barth, Lillian Aquilla,	Leavenworth.
Baumgartner, William Jacob,	Halstead.
Beach, James Harvey,	Wakarusa.
Beck, Araminta Gentry,	Wamego.
Beck, James Lincoln,	Wamego.
Bell, Lillian,	Girard.
Best, Maude Lucile,	Centralia.
Bigley, Alpha Norma,	<i>Knob Noster, Mo.</i>
Billings, Arthur Louis,	Cherry Vale.
Bingham, Walter Van Dyke,	<i>Estherville, Ia.</i>
Bird, Harry A.,	Baldwin.
Blackman, Maulsby Willett,	Lawrence.
Blair, Helen,	Lawrence.
Blakely, Ellen Jerusha,	Junction City.
Bowersock, Mary Gower,	Lawrence.
Boyd, Carrie Adelle,	Gideon.
Brewster, Helen Barten,	Pleasanton.
Briggs, Clarence Robert,	Hutchinson.
Bright, Robert Paul,	Pleasanton.
Brookover, Dollie Hortense,	Eureka.
Brown, Mary Ripley,	Wakarusa.
Bullene, Frederica Devereux,	Lawrence.
Burns, Lillie,	Lawrence.
Campbell, James Graham,	Wichita.
Cates, Hoite,	Chanute.
Clark, Kate Cecilia,	Lawrence.
Cloud, Riley Ransom,	Kiowa.
Cochran, Madge,	Peabody.
Cockins, Will W.,	<i>Los Angeles, Cal.</i>
Cole, Clarence Leroy,	Blue Rapids.
Cones, Joseph Munhall,	Lawrence.
Cook, Charles Edmond,	Haviland.
Cook, John Elmer,	Newton.
Cook, William Alexander,	Stafford.
Cooley, Walter David,	Wichita.
Cooper, Carl Levin,	Newton.

Corey, Homer Russell,	La Cygne.
Cory, Alice Alberta,	<i>Drexel, Mo.</i>
Courtright, John Earnest,	Independence.
Craig, Victor De Kalb,	Randall.
Cross, Matthew,	Wa Keeney.
Cross, Blanche Lucile,	Neodesha.
Cross, Roy Marion,	Neodesha.
Curry, Frank Harold,	Topeka.
David, Marguerite,	Lawrence.
Davison, George Mark,	Wichita.
Dodge, Nellie Blanche,	Beloit.
Dofflemeyer, Bertrand,	Maize.
Douthart, Ava,	Pratt.
Douthart, Lela Ferree,	Pratt.
Durland, Benjamin Merrill,	Centralia.
Elmore, Nellie Munich,	Harper.
Erwin, Margaret Ellen,	Chapman.
Eshbaugh, Herbert Lincoln,	Iola.
Evans, Fred Jordan,	Washington.
Everett, Edna,	Pleasanton.
Field, Russell Willard,	Solomon City.
Finney, May,	Lawrence.
Fisher, Charles Edward,	Lyons.
Foster, George Otis,	Garnett.
Fox, Ethel Lynn,	Lawrence.
Frebert, Fred William,	<i>St. Louis, Mo.</i>
Frisselle, John Earle,	Blue Rapids.
Gaddis, Jessie,	Newton.
Gallup, Stella Cornelia,	Blue Rapids.
Goode, Mary Lane,	Olathe.
Goudy, Arthur Lincoln,	North Lawrence.
Greenleaf, Fred Miller,	Greensburg.
Gregg, John Andrew,	Eureka.
Gregg, Mabel,	Lawrence.
Griggs, Lulu Marguerite,	Lawrence.
Hall, Augusta Ernestine,	Lawrence.
Hall, John Austin,	La Cygne.
Hall, Lola Mildred,	Sedgwick.
Hall, Orville Dwight,	Burlington.
Hamilton, Roland Jerome,	Arkansas City.
Hamman, Ira Willis,	Burlington.
Harris, Edward Amos,	<i>Meridian, Miss.</i>
Harrison, John Wendell,	Lawrence.
Hartman, Mary Silome,	Carbondale.
Harwood, William Tecumseh,	Kingman.
Haury, Richard Samuel,	Halstead.
Havens, Lou,	Minneapolis.

Hay, James Eli,	Burlington.
Henry, Mabel Selby,	Chanute.
Henry, William Erwin.	Independence.
Herr, Alverna Martha,	Wamego.
Herrington, Florence E.,	Lawrence.
Highleyman, Samuel Day,	Chetopa.
Hill, Arthur,	Lawrence.
Hirshler, Arnold Samuel,	Hillsboro.
Hodgdon, Maude Edith,	Lyons.
Holaday, Guy Victor,	Lawrence.
Holliday, Frank Mortimer,	Hutchinson.
Hooper, Thomas Henry,	Lebanon.
Horkmans, David Martin,	Concordia.
Howell, Edward Justus,	Lecompton.
Hutchinson, Winslow,	Hutchinson.
Ide, Arthur Wheaton,	<i>Creston, Iowa.</i>
Ide, Fred Waterman,	<i>Creston, Iowa.</i>
Irwin, Edith Lilia,	Lawrence.
Jackman, Samuel E.,	Minneapolis.
Jehlik, Frank Joseph,	Belleville.
Johnson, Beile A.,	Winfield.
Jones, Bertha Anna,	Pleasanton.
Kelley, Walter Lawrence,	Frankfort.
Kennedy, Albert Rutherford,	Wakarusa.
Kennedy, Elwood Horace,	Wakarusa.
Kerfoot, Benjamin Hugh,	Wichita.
King, Jefferson Perry,	Lawrence.
King, Robert Lawrence,	Lawrence.
Kinzie, Harvey,	Hiawatha.
Kleinknecht, Helen,	Newton.
Knight, Lucile Josephine,	Beloit.
Lacy, Enola Augusta,	Lawrence.
Lander, Robert Charles,	Humboldt.
Lawrence, Netty Margaret,	Garden City.
Leach, Minnie Luella,	Leavenworth.
Lees, Anna Scott,	Howard.
Lenau, Charles William,	Gaylord.
Leonard, Howard Chase,	Girard.
Lindas, Edward Starks,	Pawnee Rock.
Logan, Kirk Harold,	Cherry Vale.
Maggard, Delano Irvin,	Oxford.
Mains, James Ray,	Oskaloosa.
Majors, Joseph Oliver,	Girard.
Manley, Nettie Ermina,	Junction City.
Marks, Minnie,	Council Grove.
Mead,* Albert Clyde,	Fort Scott.

*Deceased.

Moore, Blaine Free,	Cherry Vale.
Moore, Clinton James,	Oketo.
Moore, Louise Jane,	Washington.
Montgomery, Florence Mabel,	Troy.
Morgan, Gladys Franc,	Lawrence.
Moulton, Fay R.,	Marion.
McKay, Bert Jewell,	Girard.
McKee, Clara Frances,	Enterprise.
McKenna, Lawrence Walter,	Kingman.
McKnight, James Rankin,	Junction City.
McShea, Earl,	Chapman.
McWilliams, Thomas Rutherford,	Lawrence.
Nichols, James Franklin,	Harlan.
Norris, Frances Helen,	Iola.
O'Keefe, Elizabeth Genevieve,	Leavenworth.
O'Keefe, James John,	Dafer.
Olsen, Louis Bernard,	Tonganoxie.
Osborn, Andrew Curtis,	Frankfort.
Overmyer, George Edward,	Topeka.
Owen, Benjamin,	Guelph.
Owens, Alpha Loretta,	<i>Lake City, Iowa.</i>
Owens, Eugene Herbert,	<i>Lake City, Iowa.</i>
Owens, Frederick William,	<i>Lake City, Iowa.</i>
Pampel, Heber S.,	Centralia.
Parent, Frank Dyal,	Abilene.
Parks, William Gordon,	Cherry Vale.
Peace, Larry M.,	Independence.
Peck, Cora M.,	Sabetha.
Perkins, Otis Edward,	Lawrence.
Peters, Samuel Hendrun,	Mankato.
Phillips, Fletcher Max,	Lawrence.
Phillips, Julia Marie,	Leavenworth.
Piatt, Eugenia de Valcourt,	Lawrence.
Pierson, Jesse Vernon,	Frankfort.
Poehler, Laura Marie,	Wakarusa.
Poorman, Bert Allen,	Junction City.
Poorman, Hoyt Alvie,	Junction City.
Porter, Florence Elizabeth,	Kansas City.
Porter, Raphael Asa,	Phillipsburg.
Post, Allen Jacob,	Phillipsburg.
Pyle, Effie B.,	Haviland.
Pyle, Nell Josephine,	Haviland.
Rees, Orton Tilden,	Sabetha.
Rethorst, Otto William,	Wellington.
Reynolds, William Wall Aylesworth,	Clay Centre.
Rinehart, Zoe,	Wamego.
Rogers, Austin Flint,	<i>Kansas City, Mo.</i>

Ronnebaum, Henry John,	Seneca.
Russell, Rusel Coe,	Great Bend.
Saunders, Kate Wood,	Lawrence.
Sayre, William Platt,	Lawrence.
Schöler, Ernest Lawrence Andrew,	Wamego.
Sellards, Clara,	Scranton.
Sellards, Elizabeth Mattie,	Scranton.
Sellards, Gertrude,	Scranton.
Sexton, Alice May,	Minneapolis.
Shaler, Maude Eilene,	Abilene.
Shaler, Millard King,	Abilene.
Sharrard, George M.,	Atchison.
Sheffield, Raymond Melville,	Marysville.
Shellabarger, Belle,	Horton.
Shellabarger, Mary Josephine,	Topeka.
Shinn, Edwin Frank,	Quenemo.
Sinnott, Zoe,	Oswego.
Smith, Matthew Allen,	Cawker City.
Smothers, Kitty,	Lawrence.
Souder, Daisy,	Newton.
Spain, Clifford Robert,	Beloit.
Spaulding, Alice Josephine,	<i>Lincoln, Neb.</i>
Stafford, Orin F.,	Altoona.
Stafford, Mabel Kurtz,	Altoona.
Storm, Effie Elizabeth,	Frankfort.
Sutton, Walter Stanborough,	Russell.
Tangeman, Harry Harmon,	Newton.
Taylor, Charles Ellis,	Lawrence.
Taylor, Satie,	Alton.
Thompkins, Harvey Melvin,	Oskaloosa.
Tinkham, David Wilbur,	Wellington.
T'Miller, Eleanor,	Hiawatha.
Upham, George Ne xhall,	Coffeyville.
Van Fleet, Elma Mary,	Kingman.
Van Fleet, Jennie May,	Kingman.
Wager, Charles Edmund,	Pittsburg.
Welsh, Burt Watson,	Newton.
White, Anna Dorris,	Delphos.
Whitney, John Arthur,	Garnett.
Whitney, Will Russell,	Garnett.
Wickham, Florence,	Sabetha.
Willett, Etta Lydia,	<i>Montezuma, Ia.</i>
Willett, Mabel Eleanor,	<i>Montezuma, Ia.</i>
Williams, William Edwin,	Lawrence.
Wilson, Esther Mary,	Hays.
Wise, Marguerite Eliza,	Hutchinson.
Withington, Wilfred,	Humboldt.

Wyatt, Walter Anton,	Howard.
Young, Charlotte Bourne,	Newton.

Freshmen, 235.

SPECIALS.

Addison, Katherine,	Salina.
Annan, Harry Cyril,	Beloit.
Ayers, Elizabeth Perry,	Lawrence.
Barrow, James Stephen,	Ellinwood.
Barteldes, Erna Louise,	Lawrence.
Beam, Albert,	Esbon.
Beery, Carrie,	Larned.
Boyd, Eric,	Newton.
Bredes, Flora,	Lincoln Center.
Bullene, Marguerite,	Lawrence.
Caldwell, John William,	Lawrence.
Carroll, Edwin Earl,	Lawrence.
Cary, Harvey Myers,	Lawrence.
Christensen, John Cornelius,	Mariadahl.
Clark, Abbie Irene,	<i>Warrensb'g, Mo.</i>
Collett, Elizabeth Edith,	Elk.
Collins, John Milton,	Washington.
Colvin, Bertha Julia,	Junction City.
Cunningham, Walter Milburn,	Beloit.
Curry, Alice Sarah,	Nortonville.
Davis, Katherine Forest,	Stockton.
Elberson, Jesse Albert,	Sedgwick.
Elliott, Sherman Grant,	Mayetta.
Emmett, Harry Louis,	Lawrence.
Field, Robert Stillman,	Medicine Lodge.
Foster, Paul,	<i>Guthrie, Okla.</i>
Frazer, Della Stuart,	Lawrence.
Freyschlag, Norma,	<i>Kansas City, Mo.</i>
Gernon, Mary Kathleen,	Russell.
Glenn, Zella Martin,	Holton.
Greissinger, Harriet Mary,	<i>Ft. Niobrara, Nb.</i>
Griesa, Mabel,	Wakarusa.
Hamilton, Homer,	El Dorado.
Harkins, Ina M.,	Topeka.
Hayes, Stella Harriett,	Lawrence.
Hayne, Henry W.,	Lawrence.
Hobson, Chattie,	Paola.
Holaday, Blanche,	Lawrence.
Hooper, Mrs. Thos. H.,	Judson.
Howell, Clarence Walter,	Lawrence.
Jamieson, Anna J.,	Holton.
Jones, Bella,	Minneapolis.
Jones, Walter Cassius,	Iola.

Kennedy, Linnie,	Wakarusa.
Langston, Carrie Mercer,	Lawrence.
Lawrence, Effie,	Garden City.
Lee, Mary Cornelia,	Manhattan.
Leslie, Elizabeth,	Lawrence.
Messenger, Lora Estelle,	Hutchinson.
Miles, Harriette,	Elgin.
Miller, Cora Ellen,	Lawrence.
Mitchner, Wm. Forrest,	Norton.
Montgomery, Henry W.,	Troy.
McGinn, Jennie E.,	Sedgwick.
McKeever, Edith Shattuck,	Holton.
Peterson, Chas. Harry,	Enterprise.
Phillips, Jutta June,	<i>Kansas City, Mo.</i>
Porter, Lizzie Ann,	Lawrence.
Powell, George K.,	Minneapolis.
Reese, Harriett Brown,	<i>Kansas City, Mo.</i>
Reno, Minnie Belle,	Lawrence.
Rhea, Mrs. Nina,	<i>Mt. Ida, Ark.</i>
Riddle, Mary E.,	Lawrence.
Rogers, Mabel Clare,	Washington.
Scammon, Mary Hopkins,	Cherokee.
Selby, Jennie May,	Manhattan.
Shane, Myrtle Ora,	Lawrence.
Shaw, Joseph Cook,	Dennison.
Shellabarger, Frank Louis,	Topeka.
Sheridan, John Wise,	Paola.
Simmons, Lillian Belle,	Lawrence.
Slawson, Marion G.,	Girard.
Smith, Rose E.,	Lawrence.
Snow, Edith Huntington,	Lawrence.
Stephenson, Geo. Washington,	Clements.
Stevens, Anna Ruble,	Emporia.
Stokes, Grace J.,	Manhattan.
Stokes, Tacy V.,	Manhattan.
Sweezy, Schuyler Colfax,	Olivet.
Torrance, James Howard,	Ellinwood.
Tucker, Elbert Stephen,	Wichita.
Voigts, Emil Elmer,	Rosedale.
Wagner, George,	Lawrence.
Weeks, Ella,	Lincoln.
Wheeler, Mark,	Bridgeport.
Wiedemann, Louise Augusta,	Lawrence.
Wilder, Fred Morse,	Lawrence.
Wilkinson, Rose Lottie,	Kiowa.
Wiley, Amelia Charlotte,	Lawrence.
Williams, Edna,	Ottawa.

Williams, Willis Irwin,	Kirksville, Mo.
Wilson, Carey Josephus,	Ottawa.
Wolbert, Robert Douglas Timberlake,	Cawker City.
Wolcott, Guy Edward,	Tonganoxie.
Wood, David William,	Strong City.

Specials, 95.

PREPARATORY MEDICAL.

Beach, Mark,	Wakarusa.
Book, Noah L.,	Talmage.
Demott, Chester Wilmot,	Independence.
Duncan, Thomas,	Kanwaka.
Klingberg, Wm. August,	Dillon.
Mabry, Elmer Dudley,	Elma, Iowa.
Wilson, James Embrey,	Garnett.
Young, Porter,	Ness City.

Preparatory Medical, 8.

School of Engineering.

SENIORS.

Boone, Victor O., C. E.,	Baxter Springs.
Campbell, James Edgar, E. E.,	Warrensburg, Mo.
Canavan, Asa Lord, E. E.,	North Lawrence.
Clark, Harry G., C. E.,	Leavenworth.
Clark, Herbert Anthony, E. E.,	Cottonwood Falls.
Galbreath, William Otto, C. E.,	Utica, Mo.
Gilmore, Frank Lansing, E. E.,	Lawrence.
Haggart, Cecil Neil, C. E.,	Salina.
Hoad, William Christian, C. E.,	Lecompton.
Jio, Mamoru, E. E.,	Tokio, Japan.
Kraus, Charles August, E. E.,	Hays City.
Kyser, Willis Melvin, E. E.,	Grenola.
Lee, John Merrill, E. E.,	Kansas City, Mo.
Macomb, John Navarre, jr., C. E.,	Coffeyville.
Meyers, Alfred Mayer, C. E.,	Peabody.
Norton, Edwin Willett, E. E.,	Newton.
Sears, Thomas Bartlett, C. E.,	Tescott.
Walker, William Tecumseh, E. E.,	Kansas City, Mo.
Watson, Malcolm Van, E. E.,	Lawrence.

Seniors, 19.

JUNIORS.

Alexander, James Richard, C. E.,	Kansas City, Mo.
Drysdale, James Murray, E. E.,	Greensburg.
Fiester, Cecil Beaumont, E. E.,	Whiting.
Fletcher, John Herbert, Chem. E.,	Fort Scott.

Griggs, Sidney Wesley, C. E.,	Lawrence.
Haynes, Roy Scott, C. E.,	Leavenworth.
Johnson, Lane, E. E.,	<i>Kansas City, Mo.</i>
Matthews, Fred Elwood, E. E.,	Nickerson.

Juniors, 8.

SOPHOMORES.

Cowdrey, Clarence Eugene, E. E.,	Seneca.
Dewey, Ernest Kirk, E. E.,	Farlinville.
Duer, Harry Eldon, E. E.,	Arkansas City.
Hazen, Rufo Arling, E. E.,	Lawrence.
Maxwell, Howard, E. E.,	Morrill.
Phenicie, Carrol Rubican, E. E.,	Fort Scott.
Reece, Charles Alfred, E. E.,	White Cloud.
Selig, Ernest T., E. E.,	Lawrence.
Wickstrum, Cecil M., E. E.,	Clay Center.
Wood, George J., E. E.,	Clay Center.
Yahn, William F., E. E.,	Lawrence.

Sophomores, 11.

FRESHMEN.

Andrews, Walter Harwood, E. E.,	Kansas City.
Avery, Hubert Charles, C. E.,	Manhattan.
Baker, Orth Kitchell, E. E.,	Mound Valley.
Barry, Vail Thibondeau, C. E.,	Fort Riley.
Bates, Fred Jonathan, E. E.,	Marysville.
Bayless, Otis A., E. E.,	Lawrence.
Carter, Edwin Albert, C. E.,	Lawrence.
Close, Burt, C. E.,	Norton.
Crawford, Loyal Folliard, E. E.,	Girard.
Cutler, Earl Wingate, C. E.,	Harper.
Edmondson, Robert, E. E.,	Lawrence.
Edson, James Oliver, E. E.,	Olathe.
Flickinger, John Fressler, E. E.,	Plymouth.
Freeman, David, E. E.,	Clay Center.
Fry, Edgar Allen, E. E.,	Abilene.
Funk, Ambrose C., E. E.,	<i>Palm, Pa.</i>
Gerteis, Henry, E. E.,	Derby.
Giggy, Edwin Clyde, E. E.,	Burrton.
Hall, Walter Steighley, E. E.,	<i>Kansas City, Mo.</i>
Heinecke, Walter Charles, E. E.,	Jewell City.
Henley, Roy Albert, E. E.,	Lawrence.
Hillebrandt, Charles, E. E.,	Osborne.
Jensen, Hans, E. E.,	Hays City.
Johnson, Fred, E. E.,	Leavenworth.
Kasana, Hubert Yeizo, C. E.,	<i>Tokio, Japan.</i>
Keeley, Royal Rockwood, E. E.,	Augusta.
Landis, Paul, E. E.,	Lawrence.

Lieberman, Jerome Sidney, C. E.,	Kansas City, Mo.
Martin, Ira Sanford, E. E.,	Newton.
Mason, Lynn Emerson, E. E.,	Lawrence.
Priestly, James A., E. E.,	Baldwin.
Pulver, Frank, C. E.,	Chapman.
Rankin, Carl, E. E.,	Lawrence.
Reilly, Harry Joseph, C. E.,	Fort Riley.
Riedy, Anthony Doney, E. E.,	Ottawa.
Ruth, Abraham John, C. E.,	Moundridge.
Sanderson, John Christopher, C. E.,	Rich Hill, Mo.
Schrader, Elmer Anthony, E. E.,	Clay Center.
Seaton, Leroy, E. E.,	Atchison.
Shipman, Harry Lee, E. E.,	Marion.
Silver, Lon Vale, E. E.,	Morganville.
Spiers, Arthur C., E. E.,	Lyons.
Taylor, Melvin H., E. E.,	Lyons.
Thatcher, Reno Eddy, E. E.,	Great Bend.
Tobey, William Henderson, E. E.,	Washington.
Walling, Victor Roy, E. E.,	Lawrence.
Yale, Jed Rial, E. E.,	Belleville.

Freshmen, 47.

SPECIALS.

Anderson, Paul, E. E.,	Stanton.
Arnold, Dean Collier, E. E.,	Louisville.
Bretch, Edward, E. E.,	Newton.
Burkholder, Philo Semple, C. E.,	Harper.
Cluster, Burt, E. E.,	Jewell City.
Dennis, Walter, E. E.,	Kansas City.
Kreamer, Harvey, E. E.,	Jewell City.
Schroeder, Howard Walter, E. E.,	Wichita.
Stewart, William James, E. E.,	Topeka.
Stone, Fred, E. E.,	Florence.

Specials, 10.

School of Pharmacy.

SENIORS.

Allen, Roy Eugene,	Wichita.
Clinger, Nelson Wesley,	Lawrence.
Dillard, James Evart,	Fort Scott.
Ferrel, Hugh Clark,	Stanley.
Fisher, Dora Catherine,	Leavenworth.
Hayden, William M.,	Larned.
Kirkland, Dan C.,	Olathe.
Kohl, Herman B.,	Hays City.
Means, Ash,	Wichita.
Murray, Joseph Patrick,	Lawrence.

McKinnie, Charles E.,	Beloit.
Nixon, Willie Elmer,	Girard.
Overlander, Chas. Leonard,	Leona.
Rankin, Claude W.,	Idana.
Smith, George Mike,	Augusta.
Smith, Maurice R.,	Russell.
Spencer, Herbert,	Lawrence.
Swayze, Jason Clarke,	Topeka.
Temple, Harry P.,	Tyro.

Seniors, 19.

JUNIORS.

Adams, Chas. Francis,	Sabetha.
Carter, Newton E.,	Solomon.
Crawford, Georgia Imogene,	Girard.
Ermey, Chas. Wesley,	Chanute.
Flad, Edwin A.,	Frankfort.
Farney, George Emery,	Hutchinson.
Grubbs, Loehr M.,	Topeka.
Hargis, Arthur,	Troy.
Hartigan, William Henry,	Horton.
Higgis, John K.,	Girard.
Higginson, Henry Dwight,	Wichita.
Hoyt, Raymond,	Lawrence.
Jones, Felix Grant,	Leoti.
Lauck, Allan Abbot,	Topeka.
Lewis, Olive St. Claire,	Topeka.
Marsh, John W.,	Topeka.
Marsh, Roy,	Fort Scott.
Newlin, Mahlon Ernest,	Lawrence.
Packer, Ella Pearl,	Osage City.
Rath, Robert Markley,	Dodge City.
Rogers, Reginald Henry,	Arlington.
Scammon, Frank Chas.,	Scammon.
Steele, Harry Edwin,	Maize.
Thomas, Edward J.,	Bala.
Uhl, Harvey L. V.,	Gardner.
Waldo, George Lyons,	Burlingame.
Wheeler, Earl Ralph,	Lakin.
Will, Norval H.,	Manhattan.
Wilson, Della Mae,	Atchison.
Wolcott, George Wm.,	Russell.
Yielding, Chas. Wm.,	Chase.

Juniors, 31.

SPECIALS.

Constable, Rollie Oliver,	Ludell.
Geiger, William Walter,	Everest.
Gilbert, Harry,	Le Roy.

Laughlin, Joseph Whitaker,	<i>Highland, Colo.</i>
Leach, Walter Fundenburg,	Atchison.
Minnehan, James Paul,	Summerfield.
Northrup, John Frederick,	Kansas City.
Price, Claud Edwin,	Everest.
Reid, David William,	Lebo.
Spencer, Daniel Hooker,	Wakarusa.
Strahl, Otho,	White City.

Specials, 11.

School of Law.

SENIORS.

Allen, George R.,	Atchison.
Bettis, George Mitchell,	Oswego.
Bolinger, Harry Albert,	Fort Scott.
Brown, Ray Ambrose,	Junction City.
Bryant, Wellington Walton,	Salina.
Bulger, James Joseph,	Keelville.
Burdick, Mary Lovell,	Carbondale.
Charles, Thomas,	Republic.
Cline, Wesley Burton,	La Cygne.
Corwin, Thomas Montgomery,	Topeka.
Cranmer, George Fennimore,	Dover.
Cranmer, Jennie,	Dover.
Cronk, William Lonzo,	<i>Castle, Mont.</i>
Davis, Harry Glenn,	Chetopa.
Dickey, William Clayton,	Leota.
Dunn, Joseph Foster,	Ellinwood.
Eckman, David Miller,	<i>Troy, Idaho.</i>
Ellis, Fred Roscoe,	Medicine Lodge.
Foulks, Albert Sidney,	Utica.
French, A. Markle,	Jamestown.
Games, John Ira,	Baldwin.
Gear, Dudley Dale,	Greeley.
Hamill, Bertrand Dewey,	Wakarusa.
Hamon, Jake Louis,	Sedan.
Hancock, Benjamin Harvey,	Stanley.
Harris, Fred Milo,	Ottawa.
Hayden, George P.,	Wetmore.
Hayden, Richard F.,	Wetmore.
House, Frank E.,	Lawrence.
Julian, Charles Clifton,	Cherry Vale.
Jackson, Thomas,	Waverly.
Kelly, Simpson,	Porterville.
Kimpton, Carl E.,	Netawaka.

Kitchell, William H.,	Topeka.
Kretsinger, William Samuel,	Emporia.
Layton, Walter Adonis,	Axtell.
Little, Chancey B.,	Olathe.
Markley, Jacob,	Willow Springs.
Morgan, Edwin B.,	Princeton.
McKay, Frank J.,	Girard.
McLaughlin, Harry W.,	Arkansas City.
McVicar, Dana Collins,	Topeka.
Olston, Herman A.,	Axtell.
Pitman, Frank Leslie,	Louisburg.
Rafter, Myron De Vere,	Holton.
Reeder, Charles Ward,	Troy.
Reid, Hessie M.,	Winfield.
Saylor, Burton Emory,	Sabetha.
Simpson, Ernest Guy,	Beloit.
Sloan, Arthur Collins, jr.,	<i>Colorado Spr'gs.</i>
Speak, Fred,	Kansas City.
Spencer, May Hotchkiss,	Wakarusa.
Sherman, Glen,	Seneca.
Stanley, Claudius Chalmers,	Wakarusa.
Stewart, Samuel Vernon,	Waverly.
Strawn, Samuel Morris,	Valley Falls.
Street, Arthur Leonard Howell,	Neodesha.
Symons, Arthur Henley,	<i>Spinland, Ind.</i>
Van Meter, Maurice Vain,	Wellsville.
Van Meter, Will J.,	Parsons.
Wall, Nathaniel Anthony,	Solomon.
Wilcox, Alonzo D.,	Muscotah.
Woodard, Fred B.,	Lawrence.

Seniors, 63.

JUNIORS.

Andrews, Bertram Daniel,	Arkansas City.
Beck, Frank Clifford,	Topeka.
Benson, Edward Henry,	Belleville.
Blair, Walter Scott,	Netawaka.
Blochberger, Carl,	Leavenworth.
Bowes, William,	Wamego.
Brady, Edward Hugh,	Chetopa.
Brady, Thomas McMahon,	Chetopa.
Burton, Detroit Lee,	Echo.
Butler, Timothy John,	Glasco.
Buttomer, John Charles,	Olathe.
Chamberlain, Frank Henry,	Topeka.
Clingman, Ord C.,	Cawker City.
Courtright, Percy Leroy,	Independence.
Crosswhite, Benjamin Jefferson,	Parker.

Dana, John William,	Ottawa.
Davis, Clarence,	Stockton.
Decker, Perl D.,	Hollis.
Dodson, Roy,	Idana.
Elder, Harrie Sutton,	Palmyra.
Field, Seward Irving,	Medicine Lodge.
Fitzpatrick, William E.,	Concordia.
Foote, Charles Henry,	Hanover.
Gaba, John William,	Baxter Springs.
Greene, Arthur Albert,	Lecompton.
Hamer, Daniel Webster,	Madison.
Hamilton, Homer,	El Dorado.
Harrison, John William,	Topeka.
Herndon, Tom,	<i>St. Joe, Tex.</i>
Hogg, James Franklin,	Columbus.
House, Edwin Luther,	Lawrence.
Howard, Alfred Stephenson,	Baldwin.
Howsley, Robert Lucellus,	Leavenworth.
Hyatt, William Sheridan,	Altamont.
Hyatt, Catherine Swope,	Altamont.
Johnson, Charles William,	Dwight.
Jones, Eldo Delbert,	Burrton.
Keller, Edith Nilsson,	Marion.
Kile, Harry,	La Cygne.
Lane, Oscar Jasper,	Lawrence.
Leland, Edward James,	Ellinwood.
Le Van, Orville C.,	Wichita.
Majors, Alexander Lymann,	Girard.
Meehan, Henry Patrick,	Blaine.
Morgan, Milo Edwin,	Lawrence.
Munz, Charles J.,	Waverly.
Murphy, Maurice,	<i>Sedalia, Mo.</i>
McGill, Crandon O.,	Great Bend.
McBrian, Leo Arthur,	Sedan.
McKeever, Horace Greeley, jr.,	Valley Falls.
Peddicord, Charles Albert,	Williamsburg.
Poston, Walter,	Netawaka.
Penn, William Walter,	Atchison.
Pyle, Etna Maurice,	Haviland.
Pownall, Homer Fenton,	Thayer.
Ryan, Colonel William,	Hiawatha.
Roser, Edward Frederick,	Leavenworth.
Sample, Edwin Parker,	Downs.
Sellards, Cora Kirby,	Scranton.
Smith, Thomas Davenport,	Hiawatha.
Sample, Robert, jr.,	Toronto.
Spalding, Phineas,	<i>Lincoln, Neb.</i>

For admission to the present year.
I also enclose copy of announcement sent out with reference to the
work of the present year.

Yours sincerely,


Chancellor.

Enc. Cata. ✓

THE UNIVERSITY OF KANSAS.

CHANCELLOR'S OFFICE.

Lawrence,

21 Oct., 1898.



James Russell Parsons, Jr.,

Office of the Regents of the University of the State of New York,

Albany, New York.

Dear Sir:-

I have your circular letter of recent date asking for official announcements of our medical department. The University of Kansas at present has only a first year medical course in that department. I forward you herewith a copy of our catalogue, in

Sherbern, Louis,	Haskell.
Somerville, Jay Wilbur,	Lawrence.
Spohn, Leon Herbert,	Linn.
Stanley, William Harvey,	Wakarusa.
Steele, William Graham,	Lawrence.
Stewart, Samuel Vernon,	Waverly.
Thompson, James William,	Waterville.
Thorp, Claude Marks,	Cawker City.
Uhl, Leonard Charles, jr.,	Smith Center.
Von Trebra, Walter Anton,	Chetopa.
Wheeler, Mark,	Bridgeport.
Wilkinson, Dunn William,	Kiowa.
Williams, Arthur R.,	Lawrence.
Williams, Willis Irwin,	<i>Kirksville, Mo.</i>
Wood, Frederick Hill,	<i>Kansas City, Mo.</i>
Woodward, John Angus,	Salina.
Wright, George Goodson,	<i>Norborne, Mo.</i>
Zwick, William Herman,	Abilene.

Juniors, 80.

SPECIALS.

Bennett, Alberta M.,	Iola.
Bucher, Neil,	Douglass.
Bunten, James Muir,	Scranton.
Cheatham, William Leon,	Richmond.
Colee, Edwin Botts,	Hutchinson.
Dryden, Littleton P.,	Hiawatha.
Foster, Frank Wright,	Clifton.
Foster, Nathaniel Thomas,	Gardner.
Frye, Charles Willett,	Lawrence.
Games, Moses William,	Baldwin.
Griffin, Samuel,	Medicine Lodge.
Hazzan, Elijah B.,	Lawrence.
Holdren, Joseph W.,	Spring Hill.
Howland, Genevieve Constance,	Lawrence.
Lloyd, Joseph Lewis,	Galena.
Means, James Williamson,	Wakarusa.
Metsker, James Wallace,	Le Roy.
Montgomery, Henry William,	Troy.
Mosse, Arthur St. Leger,	Arkansas City.
Neihart, Cassius Tyndall,	Carbondale.
Noyes, Alfred Harvey,	Parsons.
Rogers, William Howard,	Washington.
Rumold, Christian Ferdinand,	Dillon.
Towner, Charles Clifford,	Mankato.
Watson, Charles Jay,	Overbrook.
Watteville, Charles,	Reno.

Weilep, Franklin John,	Galena.
Weingartner, Henry,	Topeka.
Wolfe, W. Clyde,	Wilson.
Specials, 29.	

School of Fine Arts.

GRADUATE STUDENTS.

Spaulding, Gertrude,	Lawrence.
Orton, Daisy June,	White Cloud.
Graduates, 2.	

SENIORS.

Boyles, Kate,	Lawrence.
Fisher, Mabel Annie,	North Lawrence.
Ireton, Della,	Chapman.
Lofgren, Hilda Henrietta,	Lawrence.
Miller, Maud,	Pratt.
McShea, Maud Isabelle,	Chapman.
Pampel, Carrie Electa,	Centralia.
Thrasher, Sara Emily,	<i>S. Francisco, Cal.</i>
Welch, Mary,	Burrton.
Winnek, Alberta,	Manhattan.
Seniors, 10.	

JUNIORS.

Babcock, Frances Adelaide,	Wakarusa.
Brantner, Lena Leota,	Wallula.
Burnett, Belle,	Blue Rapids.
Gilbert, Thomas Howard,	Haviland.
Hall, Lalage,	Hutchinson.
Merrill, John Jacobs,	<i>Greenfield, Mo.</i>
Safford, Emma Elizabeth,	Augusta.
Snyder, Maud L.,	Lawrence.
Thorp, Laura,	Marion.
Weber, Sophie,	Lawrence.
Juniors, 10.	

SOPHOMORES.

Brown, Jessie,	Piper.
Criss, Bessie,	Lawrence.
Faas, Blanche H.,	Lawrence.
Gowell, Prudie Brown,	Linwood.
Green, Louise,	Holton.
Hartman, Anna,	Carbondale.
Hays, Grace,	Great Bend.
Hudson, Elizabeth,	Fredonia.
Madden, Mollie,	Hays City.
Maxwell, Maud B.,	<i>Keokuk, Iowa.</i>
McClair, Agnes Loretta,	Carbondale.

Nungesser, Ella,	Parker.
Rees, Olivia Ellen,	Minneapolis.
Sellards, Kate Lawson,	Scranton.
Tomlinson, Sallie Rachel,	Villesca.
Winter, Clara Sabin,	Yates Center.
	Sophomores, 16.

FRESHMEN.

Asbjornson, Emma,	Scandia.
Bangs, Grace Louvisa,	Lawrence.
Barteldes, Erna Louise,	Lawrence.
Bolt, Julia Archer,	Independence.
Clendenning, Harvey Wilson,	<i>Sabine Pass, Tex.</i>
Colvin, Bertha Julia,	Junction City.
Cooke, Maude Beatrice,	Fort Scott.
Crawford, Nina Ellen,	Girard.
Cross, Viah Mae,	Johnson.
Crowder, Maud Julia,	Burlingame.
Davis, Edith Elsie,	Lawrence.
Dickinson, Selecta Lena,	Everest.
Fiester, Blanche Anna,	Whiting.
Funk, Harry Fielding,	Wichita.
Gilmore, Anna Laura,	Overbrook.
Hall, Mabel Pauline,	Sedgwick.
Hart, Lottie Bertina,	Newton.
Heinecke, Pearle Anna,	Jewell City.
Howland, Genevieve,	Lawrence.
Hughan, Henrietta Scott,	Valley Falls.
Irwin, Alice Chloe,	Lawrence.
Jones, Jennie,	Chanute.
Kane, Katherine Maude,	Greensburg.
Kirkwood, Elizabeth Timame,	Overbrook.
Lawton, Myrtle,	Waterville.
Leedy, Clara Romaine,	Le Roy.
Luther, Winnifred Helena,	Lawrence.
Marks, Minnie,	Council Grove.
Mills, Abbie Theodora,	Lawrence.
McCormack, Bertha Maude,	Cherry Vale.
Naylor, Bessie May,	Yates Center.
Parks, Maud Allena,	Cherry Vale.
Penney, Elizabeth Alice,	Hutchinson.
Pierce, Laura Ellen,	Wichita.
Pritchard, Erma Eliza,	Emporia.
Reynolds, Grace Josephine,	Lawrence.
Selby, Jennie May,	Manhattan.
Shane, Vera Marion,	Lawrence.
Stillwell, Nora Ava,	Erie.
Wickstrum, Daisy Victoria,	Clay Center.

Summary of Enrollment.

	<i>Men.</i>	<i>Women.</i>	<i>Total.</i>
GRADUATE SCHOOL.....	30	14	44
School of Arts.			
Senior Class.....	43	28	71
Junior Class.....	44	25	69
Sophomore Class.....	40	41	81
Freshman Class.....	139	96	235
First-Year Medical.....	8		8
Special Students.....	43	52	95
Total in School of Arts.....	317	242	559
School of Law.			
Senior Class.....	60	3	63
Junior Class.....	77	3	80
Special Students.....	27	2	29
Total in School of Law.....	164	8	172
School of Pharmacy.			
Senior Class.....	18	1	19
Junior Class.....	27	4	31
Special Students.....	10	1	11
Total in School of Pharmacy.....	55	6	61
School of Engineering.			
Senior Class.....	19		19
Junior Class.....	8		8
Sophomore Class.....	11		11
Freshman Class.....	47		47
Special Students.....	10		10
Total in School of Engineering.....	95		95
School of Fine Arts.			
Graduates.....		2	2
Seniors.....		10	10
Juniors.....	2	8	10
Sophomores.....		16	16
Freshmen.....	1	39	40
Special Students.....	15	75	90
Total.....	18	150	168
Names counted twice.....	1	5	6
Total in School of Fine Arts.....	17	145	162
Total enrollment in all schools.....	678	415	1,093
Names counted twice.....	25	6	31
Total registration.....	653	409	1,062

In addition, University Extension courses have been conducted by members of the Faculty at the following cities, with the average attendance of citizen students indicated:

	<i>Lecturer.</i>	<i>Attendance.</i>
Lawrence.....	E. Miller.....	140
Lawrence.....	O. Templin.....	140
Topeka.....	A. S. Dunstan.....	40
Total.....		320

Classification of Students by Kansas Counties.

Allen	13	Marion	10
Anderson	8	Marshall	22
Atchison	8	McPherson	4
Barber	5	Miami	10
Barton	10	Mitchell	14
Bourbon	7	Montgomery	25
Brown	18	Morris	2
Butler	9	Neosho	5
Chase	5	Nemaha	18
Chautauqua	3	Ness	3
Clay	17	Norton	4
Cloud	7	Osage	25
Crawford	16	Osborne	4
Cherokee	8	Ottawa	11
Coffey	13	Pawnee	2
Cowley	16	Phillips	4
Decatur	1	Pottawatomie	9
Dickinson	22	Pratt	3
Doniphan	7	Rawlins	1
Douglas*	211	Reno	18
Elk	3	Republic	10
Ellis	4	Rice	9
Ellsworth	1	Riley	8
Finney	4	Rooks	2
Ford	1	Rush	6
Franklin	11	Russell	7
Geary	12	Saline	8
Greeley	1	Scott	1
Greenwood	6	Sedgwick	21
Harper	3	Shawnee	36
Harvey	27	Smith	5
Jackson	25	Stafford	1
Jefferson	12	Stanton	1
Jewell	7	Sumner	5
Johnson	13	Trego	3
Kearny	1	Wabaunsee	3
Kingman	4	Washington	12
Kiowa	10	Wichita	3
Labette	16	Wilson	7
Lane	3	Woodson	3
Leavenworth	29	Wyandotte	7
Lincoln	2		
Linn	17		977
Lyon	9		

*A large number of students whose names appear in this catalogue as residents of Douglas county are so catalogued because they temporarily reside in Lawrence for the purpose of attending the University.

Classification by States.

Arkansas	1	Michigan	2
California	3	Mississippi	1
Colorado	2	Missouri	46
Idaho	1	Montana	1
Illinois	2	Nebraska	5
Indiana	2	New York	1
Iowa	9	Oklahoma territory	3
Japan	2	Texas	3
Kansas	977		
Massachusetts	1		1062

GROWTH OF THE UNIVERSITY OF KANSAS, 1866-1898.

YEAR.	No. of Faculty	POST-GRADUATES.			SCHOOL OF ARTS.			NORMAL SCHOOL.			LAW SCHOOL.		
		Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...
1866-67.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1867-68.....	7	.....	.....	.....	0	2	2	.....	.....	.....	.....	.....	.....
1868-69.....	8	.....	.....	.....	0	6	6	.....	.....	.....	.....	.....	.....
1869-70.....	8	.....	.....	.....	6	11	17	.....	.....	.....	.....	.....	.....
1870-71.....	9	.....	.....	.....	15	30	45	.....	.....	.....	.....	.....	.....
1871-72.....	10	.....	.....	.....	28	28	56	.....	.....	.....	.....	.....	.....
1872-73.....	11	.....	.....	.....	47	26	73	.....	.....	.....	.....	.....	.....
1873-74.....	11	.....	.....	.....	31	27	58	.....	.....	.....	.....	.....	.....
1874-75.....	10	.....	.....	.....	35	30	65	.....	.....	.....	.....	.....	.....
1875-76.....	11	.....	.....	.....	42	30	72	2	33	35	.....	.....	.....
1876-77.....	13	.....	.....	.....	49	31	80	41	79	120	.....	.....	.....
1877-78.....	12	.....	.....	.....	63	47	110	4	8	12	.....	.....	.....
1878-79.....	14	1	2	3	73	46	119	5	11	16	13	0	13
1879-80.....	16	0	2	2	68	46	114	18	42	60	18	0	18
1880-81.....	16	1	0	1	98	58	156	16	22	38	15	0	15
1881-82.....	18	1	2	3	99	49	148	20	33	53	7	0	7
1882-83.....	18	4	2	6	129	79	208	20	22	42	12	0	12
1883-84.....	19	7	3	10	106	59	165	23	41	64	24	0	24
1884-85.....	21	13	8	21	107	42	149	3	7	10	14	0	14
1885-86.....	24	8	6	14	108	49	157	.....	.....	*	29	0	29
1886-87.....	27	4	10	14	142	60	202	.....	.....	.....	32	0	32
1887-88.....	31	8	5	13	119	50	169	.....	.....	.....	33	0	33
1888-89.....	32	9	4	13	87	31	118	.....	.....	.....	51	0	51
1889-90.....	33	10	7	17	140	59	199	.....	.....	.....	56	0	56
1890-91.....	36	13	12	25	194	70	264	.....	.....	.....	44	1	45
1891-92.....	44	19	10	29	191	92	283	.....	.....	.....	77	1	78
1892-93.....	45	11	9	20	190	122	312	.....	.....	.....	84	1	85
1893-94.....	50	23	10	33	207	125	332	.....	.....	.....	78	1	79
1894-95.....	52	15	6	21	259	167	426	.....	.....	.....	98	1	99
1895-96.....	52	28	10	38	299	194	493	.....	.....	.....	119	2	121
1896-97.....	56	30	13	43	291	224	515	.....	.....	.....	147	3	150
1897-98.....	57	30	14	44	317	242	559	.....	.....	.....	164	8	172

* Normal department discontinued by act of the legislature.

GROWTH OF THE UNIVERSITY OF KANSAS, 1866-1898—Continued.

YEAR.	No. of Faculty	PHARMACY SCHOOL.			ART SCHOOL.			MUSIC SCHOOL.			SCHOOL OF FINE ARTS.		
		Male....	Female.	Total...	Male...	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...
1866-67.....	4	...	...	...	...	...	...	...	...	...	...	...	...
1867-68.....	7	...	...	...	...	...	...	...	...	...	...	...	...
1868-69.....	8	...	...	...	...	...	...	...	...	...	...	...	...
1869-70.....	8	...	...	...	...	...	...	...	...	...	...	...	...
1870-71.....	9	...	...	...	...	...	...	...	...	...	...	...	...
1871-72.....	10	...	...	...	...	...	...	...	...	...	...	...	...
1872-73.....	11	...	...	...	...	...	...	...	...	...	...	...	...
1873-74.....	11	...	...	...	...	...	...	...	...	...	...	...	...
1874-75.....	10	...	...	...	...	...	...	...	...	...	...	...	...
1875-76.....	11	...	...	...	...	...	...	...	...	...	...	...	...
1876-77.....	13	...	...	...	...	...	...	...	...	...	...	...	...
1877-78.....	12	...	...	...	...	...	...	4	15	19	...	...	...
1878-79.....	14	...	...	...	...	...	...	5	15	20	...	...	...
1879-80.....	16	...	...	...	...	...	...	3	25	28	...	...	...
1880-81.....	16	...	...	...	...	...	...	2	30	32	...	...	...
1881-82.....	18	...	...	...	...	...	...	2	21	23	...	...	...
1882-83.....	18	...	...	...	...	...	...	0	37	37	...	...	...
1883-84.....	19	...	...	...	...	...	...	2	36	38	...	...	...
1884-85.....	21	...	...	...	...	...	...	59	92	151	...	...	...
1885-86.....	24	23	0	23	0	33	33	4	63	47	...	...	...
1886-87.....	27	38	2	40	3	19	22	16	89	105	...	...	...
1887-88.....	31	40	2	42	1	21	22	6	91	97	...	...	...
1888-89.....	32	39	4	43	0	49	49	8	68	76	...	...	...
1889-90.....	33	28	3	31	9	31	40	5	54	59	...	...	...
1890-91.....	36	30	3	33	3	21	24	13	50	63	...	...	...
1891-92.....	44	37	4	41	...	...	*	...	...	*	12	100	112
1892-93.....	45	48	5	53	...	...	...	...	...	...	26	159	185
1893-94.....	50	48	6	54	...	...	...	...	...	...	†17	153	170
1894-95.....	52	58	8	66	...	...	...	...	...	...	32	177	209
1895-96.....	52	60	3	63	...	...	...	...	...	...	22	134	156
1896-97.....	56	54	4	58	...	...	...	...	...	...	37	135	172
1897-98.....	57	55	6	61	...	...	...	...	...	...	17	145	162

*At the end of 1890-'91 the Schools of Music and Art were combined.

† This year the elementary classes in the Music School were abolished.

GROWTH OF THE UNIVERSITY OF KANSAS, 1866-1898 — Concluded.

YEAR.	No. of Faculty	ENGI-NEERING SCHOOL.			PREPARATORY SCHOOL.			NAMES REPEATED, TO BE DEDUCTED.			TOTAL IN ALL SCHOOLS, AFTER DEDUCTIONS.		
		Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...
1866-67.....	4	.....	.....	.....	29	26	55	.....	.....	.....	29	26	55
1867-68.....	7	.....	.....	.....	50	53	103	.....	.....	.....	50	55	105
1868-69.....	8	.....	.....	.....	56	60	116	.....	.....	.....	56	66	122
1869-70.....	8	.....	.....	.....	66	69	135	.....	.....	.....	72	80	152
1870-71.....	9	.....	.....	.....	88	94	182	.....	.....	.....	103	124	227
1871-72.....	10	.....	.....	.....	103	106	209	.....	.....	.....	131	134	265
1872-73.....	11	.....	.....	.....	94	105	199	.....	.....	.....	141	131	272
1873-74.....	11	.....	.....	.....	67	48	115	.....	.....	.....	98	75	173
1874-75.....	10	.....	.....	.....	77	52	129	.....	.....	.....	112	82	194
1875-76.....	11	.....	.....	.....	75	78	153	2	21	23	117	120	237
1876-77.....	13	.....	.....	.....	100	64	164	0	5	5	190	169	359
1877-78.....	12	.....	.....	.....	125	128	253	11	22	33	185	176	361
1878-79.....	14	.....	.....	.....	143	114	257	11	14	25	229	174	403
1879-80.....	16	.....	.....	.....	144	107	251	9	24	33	242	198	440
1880-81.....	16	.....	.....	.....	166	111	277	21	31	52	277	190	467
1881-82.....	18	.....	.....	.....	141	96	237	8	20	28	262	181	443
1882-83.....	18	.....	.....	.....	208	142	350	24	49	73	339	243	582
1883-84.....	19	.....	.....	.....	163	105	268	16	32	46	309	212	* 521
1884-85.....	21	.....	.....	.....	144	117	261	63	72	135	277	194	471
1885-86.....	24	.....	.....	.....	90	53	143	4	43	47	258	161	419
1886-87.....	27	.....	.....	.....	99	47	146	18	54	72	316	173	489
1887-88.....	31	.....	.....	.....	110	62	172	11	54	65	306	177	483
1888-89.....	32	.....	.....	.....	146	61	207	8	44	52	332	173	505
1889-90.....	33	.....	.....	.....	90	48	138	6	26	32	332	176	508
1890-91.....	36	.....	.....	.....	27	11	38	8	10	18	316	158	474
1891-92.....	44	88	0	88	.....	.....	†	0	1	1	424	206	630
1892-93.....	45	91	0	91	.....	.....	.....	12	5	17	438	291	729
1893-94.....	50	101	0	101	.....	.....	.....	24	21	45	427	264	691
1894-95.....	52	100	0	100	.....	.....	.....	17	8	25	530	345	875
1895-96.....	52	90	1	91	.....	.....	.....	21	8	29	569	326	895
1896-97.....	56	87	0	87	.....	.....	.....	17	4	21	629	375	1004
1897-98.....	57	95	0	95	.....	.....	.....	25	6	31	653	409	1062

* This year marks the beginning of the discontinuance of preparatory studies

† At the end of 1890-'91 the preparatory department was entirely abolished.

Roll of Alumni.

NOTE.—Names marked with star (*) are deceased.

The School of Arts.

ALUMNI ASSOCIATION.

J. G. SMITH, '83,	<i>President.</i>
D. E. ESTERLY, '90,	<i>Vice-President.</i>
CLARA S. GILLHAM, '84,	<i>Recording Secretary.</i>
ARCHIE HOGG, '94,	<i>Corresponding Secretary.</i>
M. W. STERLING, '83,	<i>Treasurer.</i>
OLIN TEMPLIN, '85,	} <i>Executive Committee.</i>
A. L. CORBIN, '94,	
HARRIETTE A. FELLOWS, '90,	
ETHEL B. ALLEN, '82,	
J. D. BOWERSOCK, JR., '91,	

CLASS OF 1873.

Ralph Collins, A.B.	Flora Richardson <i>Coleman</i> , A.M.
Murray Harris, A.B.	L. D. L. Tosh, A.M.

CLASS OF 1874.

Ida Blood <i>Hasselman</i> , B.S.	Ellis B. Noyes, A.B.
	Hannah Oliver, A.M.

CLASS OF 1875.

Alice G. Boughton <i>Blackwelder</i> , A.B.	W. S. Herrick, B.S.
Martha R. Campbell <i>Hallowell</i> , A.B.	Frank P. MacLennan, M.S.
*Frank F. Dinsmoor, A.M.	Eusebia B. Mudge <i>Irish</i> , A.B.
	Kate Stephens, A.M.

CLASS OF 1876.

George F. Gaumer, M.S.	Elmer B. Tucker, A.M.
Mary E. Richardson, B.S.	Henry S. Tremper, A.M.
Willard F. Sergeant, A.B.	James A. Wickersham, A.M.
Charles W. Smith, A.M.	Lizzie Ann Williams <i>Smith</i> , A.B.

CLASS OF 1877.

Andrew Atchison, A.B.	Clara Luella Morris <i>Perkins</i> , A.M.
Everard Bierer, jr., B.S.	William Osburn, A.M.
Gertrude Alice Bullene <i>Weaver</i> , A.B.	Angelo Cyrus Scott, A.M.
George Will Hapgood, B.S.	Colin Timmons, A.B.
John Harper Long, S. D. (Tubingen).	Carrie M. Watson, A.B.

CLASS OF 1878.

Anna E. Mozley <i>Boddington</i> , B.S.	DeEtta Warren <i>Pillsbury</i> , A.B.
Hugh Tudor Richards, B.C.E.	Kate Williams <i>Boettcher</i> , A.B.

CLASS OF 1879.

Jessie A. Austin, A.B.	Lizzie J. Miller <i>Richards</i> , A.B.
Joseph W. Brigham, B.S.	Alma Richardson <i>Wallace</i> , A.B.
William T. Byrd, A.B.	Samuel M. Smith, A.B.
Charles B. Cramer, B.S.	Chandler W. Stephenson, B.S.
James W. Glead, A.M.	*Sarah I. Stevens <i>Preston</i> , A.B.
Howard H. Jenkins, A.B.	William E. Stevens, A.B.
Eudora A. Wade <i>Garrett</i> , M.S.	

CLASS OF 1880.

Wm. H. Carruth, A.M., Ph. D. (Harvard).	*James O. Hayes, A.B.
Henry V. Chase, B.S.	*Ariel E. Long, B.S., A.M.
*Cora M. Cherry <i>Mettner</i> , A.B.	Alfred E. Parker, B.S.
Sarah R. Dudgeon <i>Baskerville</i> , A.B.	Franklin Riddle, M.S.
Annie O. Gilmore, B.S.	Solon T. Williams, A.B.

CLASS OF 1881.

Alice Annie Collier <i>Rankin</i> , A.B.	Bion Shepard Hutchins, B.S.
Maggie Raymond Eidemiller, A.B.	Mina E. Marvin <i>Wilcox</i> , A.M.
Florence E. Finch <i>Kelley</i> , A.M.	Alice H. Peabody <i>Sears</i> , A.B.
Karl August Floden, A.B.	Don John Rankin, B.S.
Flora M. Hadley <i>Little</i> , A.B.	Charles Frederick Scott, M.S.
Eramus Haworth, M.S., Ph. D. (Johns Hopkins).	Edward Gleason Smith, B.S.
Stuart Oliver Henry, A.B.	Pliny Leland Soper, A.M.
George Scott Hopkins, A.M.	*Nellie Green Thacher <i>Henry</i> , A.B.
*Herbert John Humphrey, A.B.	Charles Green Upton, B.S.
Mary Webb Woodward <i>Doran</i> , A.B., B.D.	Julia M. Watson <i>Nicholson</i> , A.B.

CLASS OF 1882.

Ethel Beecher Allen, A.M.	Charles Jefferson Simmons, A.B.
Festus Foster, A.B.	Lindley Murray Spray, A.B.
Richard Foster, M.S.	Mary Elizabeth Wilder, A.B., B.D.
Abner Walter Hill, B.S.	Ellen A. Woodcock <i>Upton</i> , A.B.
Edward Clement Meservey, A.B.	Philip Connor Young, B. S.

CLASS OF 1883.

Alla May Barnes <i>Foster</i> , B.S.	Mary Catherine McQuiston, A.B.
Helen W. Bay <i>Raymond</i> , A.B.	Ann Eliza Murphy, B.S.
Samuel Wheeler Brewster, A.B.	*Robert Murdaugh Osmond, A.B.
Ada Eleanor Briggs, A.M.	Percy Blackstone Russell, A.B.
Edward Arnold Brown, A.M.	James Gabriel Smith, A.B.
Edmund Butler, B.S.	William C. Spangler, B.S., LL.B.
*Charles Curtis Dart, M.S.	Miles Wilson Sterling, A.M.
Cara E. Fellows <i>Sterling</i> , A.B.	John Foster Tucker, A.B.
Frank Day Hutchings, A.B.	Oliver David Walker, B.S., M.D.
Edward Campbell Little, A.M., LL.B.	William Solomon Whirlow, B.S.

CLASS OF 1884.

*Walter Hamlin Britton, A.B.	Glen Lewis Miller, A.B.
*Delia Kate Churchill, A.B., B.D.	Mary Elwood Miller <i>Barnes</i> , A.B.
*Mary Agnes Clarke, A.B.	William Henry Nevison, A.B., M.D. (Cincinnati).
*Charles Dickey Dean, B.S.	Cora E. Pierson <i>Hopkins</i> , B.S.
Lewis Lindsay Dyche, A.M., M.S.	Frank Prentiss, B.S.
Agnes Emery, A.B.	Lida Romig, A.B.
William Townsend Findley, A.B.	Kate L. Ridenour <i>Lester</i> , A.B.
Clara Sciota Gillham, A.B.	Albert Stanley Riddle, B.S.
Mary Green Gilmore, A.B., B.D.	Fred. Asa Stocks, M.S.
Mary Griffith <i>Osmond</i> , A.B.	Addie Mila Sutliff <i>Wheeler</i> , A.B.
Merton Joy Keys, B.S.	George Brown Watson, A.B., LL.B.
Lucius Henry Leach, A.B.	Clarence Ernest Wood, A.B.
Alice Lewette Litchfield, A.B., B.D.	

CLASS OF 1885.

Ida Charlotte Barnes, A.B., M.D.	James Vance Humphrey, B.S.
Blanche Ketene Bruce, A.B.	William Hamilton Johnson, A.M.
Eldie Franklin Caldwell, A.B., LL.B.	Victor Linley, A.B.
Samuel Marion Cook, A.B.	William Yoast Morgan, A.B.
Albert Eugene Curdy, A.B.	Lewis Morgan Powell, A.B., M.D.
Frank Sharon Foster, B.S.	John Paul Rote, A.B.
Stephen Ernest Himoe, B.S.	Henry Fremont Smith, B.S.
Nettie A. Hubbard <i>Boles</i> , B.S.	William Chase Stevens, M.S.
Harriet Clark Hulick, B.S.	Harriet Tracy Williams, A.M.

CLASS OF 1886.

Arthur L. Adams, B.S.	Rebecca E. Jacke <i>Townsend</i> , A.B.
Richard Birbeck, B.S.	William Lane, B.S.
Samuel Burkholder, A.B.	Laura Edith Lyons, A.B.
Joseph Ellsworth Curry, A.B.	John Dice McLaren, M.S., B.D.
* Harriet R. Dunn <i>Smith</i> , B.S.	Frank Thompson Oakley, B.S.
Sarah Maria Emery, A.B.	Louella Palmer <i>Graham</i> , A.B.
Julia Georgianna Flinn, A.B.	Harry Earle Riggs, A.B.
Solon Thacher Gilmore, A.B.	Evelyn Smith <i>Miller</i> , A.B.
Harlin F. Graham, A.M., B.D.	* Mary G. Stimpson, A.B., B.D.
Claribel Greenameyer, A.B.	Olin Templin, M.S., A.M.
Harriet Bliss Haskell <i>MacDonald</i> , A.M.	Lena A. Van Voorhis <i>Templin</i> , A.M., B.D.

CLASS OF 1887.

Georgia L. Bell <i>Mellon</i> , A.B.	Joseph Barlow Lippincott, B.S.
Edward Giles Blair, A.B., M.D.	Albert Calvin Markley, A.B., B.D.
Cyrus Sykes Crane, A.B.	Robert Lynn McAlpine, B.C.E.
Jeptha Dickey Davis, A.B.	Luella Jane Moore, A.B.
Denton Dunn, A.B.	* Henri Nickel, A.M., B.D.
Wm. S. Franklin, M.S., S.D. (Cornell).	Mary A. Rice, A.B., A.M., Ph.G., B.P.
Grant W. Harrington, A.B., B.D.	Ella Elson Ropes, A.B.
Claude Britton Highbargin, B.S.	Samuel W. Shattuck, jr., B.S.
Hans Clarence Himce, A.B.	Charles Lincoln Smith, B.S.
Wilbur Simpson Jenks, A.B., B.D.	Harry Denman Smith, A.B.
Cora Kimball <i>Melvin</i> , A.B., B.D.	Olive Thompson, B.S.
Agnes Wright <i>Strickland</i> , B.S.	

CLASS OF 1888.

Winfield Scott Allen, A.B., B.D.	Josephine Gilmore, A.B., B.D.
Fred Holmes Bowersock, B.C.E.	Paul Goddard, B.C.E.
William Harvey Brown, B.S.	John Morris Halligan, B.S.
Annis Francena Chaffee, A.B., B.D.	William Edward Higgins, B.S.
Adelia May Churchill <i>Stoan</i> , A.B., B.D.	Owen Cyrus Le Seur, B.C.E.
William Riley Cone, A.B., B.D.	John Adams Prescott, A.M.
Frank G. Crowell, A.B., LL.B. (Columbia).	William Turner Reed, A.B.
Austin Curtis Cunkle, A.B.	Joseph Rolston, A.B.
Thomas Francis Doran, A.B.	Frank John Savage, B.C.E.
Edward Curtis Franklin, M.S., Ph.D.	Clarence E. Springer, B.C.E.
(Johns Hopkins).	Clara A. Wilson <i>Albright</i> , A.B.

CLASS OF 1889.

Harry Buckingham, B.S.	Asa Dutton Kennedy, B.S.
William Talbot Caywood, A.B.	Mary A. Manley <i>Parmalee</i> , A.B.
Gertrude A. Crotty <i>Davenport</i> , B.S.	Anna L. McKinnon, M.S., Ph.D. (Cornell).
* George Lowman Dick, A.B.	Catherine Merrill, A.B.
Susan F. Eddy <i>Johnson</i> , A.B.	Flora A. Newlin <i>Henshaw</i> , A.B.
Sherman Allen Harvey, A.B.	Sidney Phillips, A.B.
Gertrude Oren Hunnicutt, A.B.	Frank Everett Reed, A.B.
Joseph Jacobs, B.C.E.	Alva Leslie Sloan, B.C.E.
Vernon Lyman Kellogg, M.S.	Lawrence Theodore Smith, B.S.
Edwin Eberhard Squires, B.S.	

CLASS OF 1890.

Walter Root Armstrong, A.B.	Fred. Liddeke, A.B.
Emma Bartell, B.S.	Charles Stone McFarland, B.C.E.
Harvey F. M. Bear, B.S.	Frederick Scott Pickering, B.C.E.
Schuyler Colfax Brewster, B.S.	Harry Radcliff, B.S.
Neil C. Brooks, A.B., A.M. (Harvard).	Florence Reasoner, A.B.
Abraham Lincoln Burney, A.B.	William Henry Reynolds, B.S.
B. J. Dalton, B.C.E.	John Anderson Rush, M.S., LL.B.
Emma G. Dunn <i>Wilmoth</i> , B.C.E.	Richard H. Short, B.C.E.
Daniel E. Esterly, B.S., M.D. (Penn.)	Edward Emery Slosson, M.S.
Harriette Augusta Fellows, A.M.	Edward Fiske Stimpson, B.S.
Nettie Delilah Goodell, B.S.	Helen Binninger Sutliff, A.B.
Leland DeForest Henshaw, B.C.E.	Inez Lorena Taggart, A.M.
William Hill, A.B.	Campbell McGhie Watson, A.B.
* Marcella Howland, A.B.	Park Austin Williamson, B.C.E.

CLASS OF 1891.

Marshall Albert Barber, A.B., A.M. (Harvard).	Irving Haskell Morse, B.S.
Justin DeWitt Bowersock, B.S., LL.B. (Harvard).	Galen Frank Nichols, B.S., LL.B.
Charles Parsons Chapman, A.B.	Frank Hart Olney, A.B.
James Frank Craig, A.B.	Annie Reese Pugh, A.M.
May Ibella Hair <i>Culver</i> , A.B.	Martin Everett Rice, M.S.
Walter Scott Hayden, A.B.	Herbert Fuller Roberts, A.B.
Jessamine Howell <i>Fugate</i> , A.M.	Robert Anderson Rutledge, B.C.E.
Fred Homer Kellogg, A.B.	Effie Scott <i>Franklin</i> , A.B.
Laura E. Lockwood, A.M.	Frank Charles Shrader, B.S., M.S.
Malcolm McKinnon, A.B.	William Appleton Snow, M.S.
	Virginia E. Spencer, A.M., B.D.
	Maude Springer <i>Brown</i> , A.B.

CLASS OF 1892.

Harold Barnes, A.B.	Charles H. Johnson, A.B., M.D.
Robert Diamond Brown, A.B., LL.B. (Northwestern).	James Franklin Noble, A.B., LL.B. (Northwestern).
William Wallace Brown, A.B.	Dwight Elwood Potter, A.B.
Albert Luther Candy, A.M.	James Herbert Sawtell, A.B.
Howard Elijah Copper, A.B.	Samuel McClay Simmons, A.B.
Millia Alice Crotty, A.B.	Belle Lundie Spencer, A.B.
James Edward Dyche, A.B.	Carrie T. Stewart, A.B., A.M. (Michigan).
Ova Portis Davis, A.B.	Martha Alice Thompson, A.B.
Elmer Franklin Engel, A.B.	Walter Truitt, A.B.
Herbert Spencer Hadley, A.B., LL.B. (Northwestern).	George O. Virtue, A.B., A.M. (Harvard).
	Ernest Pratt Wellman, A.B.
	Mary Harriet Wellman, A.M.

CLASS OF 1893.

George Irving Adams, A.M., Ph.D. (Princeton).	Frank Amanda Lutz, A.B.
Cora Elmira Becker, A.B.	Edith Manley <i>Chappelle</i> , A.M.
Josephine Thorndyke Berry, A.B.	Nellie Vie Morris, A.B.
Kate Blair, A.B.	Raphael Dorman O'Leary, A.B.
Nina Claire Bowman, A.B.	James Owen, A.B., LL.B.
Ermine Cowles Case, A.M., M.S. (Cornell), Ph.D. (Chicago).	William Murray Raymond, A.B.
Thornton Cooke, A.B., A.M. (Harvard).	William Wilkinson Reno, A.B.
Alberta Linton Corbin, A.B.	* William Halderman Riddle, A.B.
Parker William Cress, A.B.	Henry Clay Riggs, A.B.
William Melville Curry, A.B.	Ernest Frank Robinson, A.B., M.D. (Pennsylvania).
Grace Caroline Eaton, A.B.	Wilbert Davidson Ross, A.M.
Henry Fiegenbaum, A.B.	Maggie Sarah Rush, A.B.
	Anna Louisa Schorer, A.B.

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|---|-------------------------------|
| Albert Fullerton, A.B. | Adrian Fisher Sherman, A.B. |
| John I. Hamaker, A.B., Ph.D. (Harvard). | Elmer Eugene Soderstrom, A.B. |
| Ernest Clyde Hickey, A.B. | Daniel Hooker Spencer, A.B. |
| Mayo Ellsworth Hickey, A.B. | Eugene William Springer, A.B. |
| Samuel John Hunter, A.M. | Chauncey Vaniman, A.B. |
| Edna Jones, A.B. | Russell Ripley Whitman, A.B. |
| Francis Joseph Lange, A.B. | Josie Wilson, A.B. |
| Henry R. Linville, A.B., Ph.D. (Harvard.) | Jacob Good Wine, A.B. |

CLASS OF 1894.

- | | |
|---|--|
| James Edward Baker, A.B. | Archie Hogg, A.B., LL.B. |
| Mary Wager Barkley, A.B. | Frederick Noble Howell, A.B. |
| Rollin Elliott Blackman, A.B. | Henry Otto Kruse, A.B. |
| Schuyler C. Bloss, A.B., A.B. (Harvard). | Lloyd A. Lowther, A.B. |
| Clara Sears Bosworth, A.B. | James Vance May, A.B. |
| Fred Erskine Buchan, A.B., LL.B. | Stella May Miller <i>Neal</i> , A.B. |
| Thomas Walter Butcher, A.B. | Frank H. Moore, A.B., LL.B. (Columbia) |
| Eli Cann, A.B., LL.B. | Rose Ruth Morgan, A.B. |
| John Felix Carlson, A.B. | John Mustard, A.B. |
| Winifred Churchill <i>Owen</i> , A.B. | *Edward Isaac O'Bryon, A.B. |
| Arthur Linton Corbin, A.B. | Ezra W. Palmer, A.B. |
| Alvan Harvey Couch, A.B. | William H. H. Piatt, A.B., LL.B. |
| MacGregor Douglas, A.B. | Sherman Ploughe, A.B. |
| William Cornelius Fogle, A.B. | Laura Radford, A.B. |
| Albert Osburn Garrett, A.B. | Kate Louise Riggs, A.B. |
| Charles S. Griffin, A.B., A.M. (Harvard). | Irvin R. Rothrock, A.B., A.M. |
| Eleanora Harris, A.B. | George Alex. Schumaker, A.B. |
| Edward Harvey, A.B. | *Lorin Beecher Sears, A.B. |
| Mary K. Haskell <i>Holmes</i> , A.B. | May Hotchkiss Spencer, A.B. |
| Nelle Susannah Hawkins, A.B. | Nancy Clarinda Spencer, A.B. |
| Burrit Howell Hill, A.B. | Luther Elias Thrasher, A.B. |
| Robert Lee Hoff, A.B. | Henry Dent Wilson, A.B. |

CLASS OF 1895.

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|---|-----------------------------------|
| Maurice Le Roy Alden, A.B. | Sheffield Ingalls, A.B. |
| Kate Anderson, A.B. | Carl Edward Kimpton, A.B. |
| Anna Burnett Banks, A.B. | Effie Loader, A.B. |
| Frank Clarence Bowker, A.B. | Margaret Menet, A.B. |
| Silas Scholl Brown, A.B. | J. Frank Messenger, A.B. |
| Clarence Alexander Burney, A.B. | Harrison William Miller, A.B. |
| Fred Cahill, A.B. | Clyde Winwood Miller, A.B., LL.B. |
| May Carpenter, A.M. | John DeMott Miller, A.B. |
| Edith M. Clarke, A.B. | Luella C. Gladys Moore, A.B. |
| John Daniel Clear, A.M. | William Moore, A.B. |
| Ralph W. Cone, A.B., A.M. (Harvard). | Stanton Olinger, A.B. |
| Walter Richard Crane, A.B., A.M. | Daisy Orton, A.B., Mus.B. |
| William Christian Dick, A.B. | Byron Lee Pampel, A.B. |
| Breese Morse Dickinson, A.B. | Florence Emma Parrott, A.B. |
| John Addison Edwards, A.B. | Bertha Peterson, A.B. |
| Franc R. Fellows <i>Stimpson</i> , A.B. | Elmer Ellsworth Rush, A.B. |
| John Austin Frazier, A.B. | Madge Schaum, A.B., D.D.S. |
| Lillie May Freeman, A.B. | Theophilus H. Scheffer, A.B. |
| Ella Funston, A.B. | Mabel Scott, A.B. |
| Wilbur Ludington Gardner, A.B., LL.B. | Etoile Simons, A.B. |
| Eva Clarissa Gill, A.B. | Lucinda Smith, A.B. |
| Edward T. Hackney, A.B. | Clarence Talbot Southwick, A.B. |
| John G. Hall, A.B., A.M. (Harvard). | Mary Marena Spencer, A.B. |
| John Lyle Harrington, A.B. | Sadie Melinda Stone, A.B. |
| Edith Haskell <i>Burney</i> , A.B. | Peter J. Wedel, A.B. |
| Matilda Henrichs <i>O'Leary</i> , A.B. | Samuel A. M. Young, A.B. |
| Adelia Alice Humphrey, A.B. | Augustus P. Zeller, A.B. |

CLASS OF 1896.

Alfred Cecil Alford, A.B.	John Frederick Kinzie, A.B.
Daisy Alison, A.B.	William Newton Logan, A.B., A.M.
Burtis B. Breese, A.B., A.B. (Harvard).	Elmer Charles Ludlum, A.B.
Frederick William Brewster, A.B.	Robert Thornton Madden, A.B.
Grace Hannah Brewster, A.B.	William Joseph Madden, A.B.
Clydus Clinton Brown, A.B.	William Joseph Magaw, A.B.
Mary Burd, A.B.	Francis Kearney Moon, A.B.
Hardin Price Butcher, A.B.	Clarence Erwin McClung, A.B.
Rudolph Caughey, A.B.	Ward Carpenter McCroskey, A.B.
Peter A. Claassen, A.B.	Arthur McMurray, A.B.
Carina Antoinette Cooke, A.B.	Maude Estelle Nichols, A.B.
Mary Jane Dillard, A.B.	Larrance Page, A.B.
Anna Gosline Edwards, A.B.	James Horace Patten, A.B.
Leander Dallas Ellis, A.B.	Helen Perry, A.B.
Dean Foster, A.B.	Sydney Clarke Prentice, A.B.
Oscar James Fryar, A.B.	Cassie Alma Quinlan, A.B., A.M.
Albert B. Glathart, A.B.	Fred N. Raymond, A.B., A.M. (Columbia).
*Ralph Curtis Gowell, A.B.	Elmer Samuel Riggs, A.B., A.M.
Aaron George Grant, A.M.	Alice Rohe, A.B.
Walter Griffiths, A.B., A.M.	Alban Stewart, A.M.
Mabel Hall <i>Templin</i> , A.B.	John R. Thierstein, A.B.
Fred Ketcham Hammers, A.B.	Blanche Isabel Thoburn, A.B.
Linda Hardy, A.B.	Agnes Thompson, A.M.
John H. Henderson, A.B.	Louise Isabella Towne, A.M.
Irving Hill, A.B.	Carl E. Wallace, A.M.
Rhoda Lulu Hoover, A.B.	Eva Way, A.B.
Frank E. House, A.B.	Dora Estella White, A.M.
Joseph Warren Hullinger, A.B.	Frank R. Whitzel, A.B., A.M.
Charles Edward Johnson, A.B.	Carl Wick, A.B.

CLASS OF 1897.

Eugene Charles Alder, A.M.	Laura Ellen Kirby, A.B.
Emily Allen, A.B.	Harry Reuben Kohn, A.B.
Harriet Hull Ayres, A.B.	Maude Landis, A.B.
Emma Maude Barber, A.B.	Pauline Lewelling, A.B.
Mary Paulding Barnett, A.B.	Andrew Wilson Mann, A.B.
Lola Bell Brown, A.B.	Harry William Menke, A.B.
Hamilton Perkins Cady, A.B.	Benjamin Leroy Miller, A.B.
Florence Greeley Clarke, A.B.	Will McMurray, A.B.
May Cooke, A.B.	Lou Nash, A.B.
Alice Grace Darling, A.B.	Schuyler Opp, A.B.
Howell Emelyn Davies, A.B., Ph.C.	Roy Thornton Osborne, A.B.
Edith Davis, A. B.	Percy John Parrott, A.B.
Mary Josephine Dudley, A.B.	Charley Samuel Powell, A.B.
Robert Edward Everett, A.B.	Richard Rees Price, A.B.
Ada Faxon, A.B.	Will Thomas Reed, A.B.
Charles Lyman Fay, A.B.	May Fuller Riggs, A.B.
Leon Nelson Flint, A.B.	Roy Martin Robinson, A.B.
Frances Rebekah Frazer, A.B.	Christian A. Rohrer, A.B.
May Gardner, A.B.	Flora Isabel Rosenquist, A.B.
Minnie Geiger, A.B.	Charles Manford Sharpe, A.B.
Nicholas Andrew Gernon, A.B., LLB.	Anna Matilda Shire, A.B.
Leslie Carlton Gray, A.B.	John Christopher Short, A.B.
Sadie Greenfield, A.B.	Harold Weeks Smith, A.B.
Bessie Eleanor Grove, A.B.	Joseph Elijah Smith, A.B.
John Franklin Hall, A.B.	Ida Greeley Smith, A.B.
Louis Peter Heil, A.B.	Alta Stanton, A.B.
Oran Thomas Hester, A.B.	Charles M. Sterling, A.B.

Jennie Hosier, A.B.	George Walter Stevens, A.B.
Constance Genevieve Howland, A.B.	Gomer M. Thomas, A.B.
Levi Daniel Ikenberry, A. B.	Nora Maud Tinsley, A.B.
Edward Payson Irwin, A.B.	Elizabeth Warren, A.B.
Charles Augustus Katherman, A.B.	Frederick Hill Wood, A.B.
Carrie Katherman <i>Wallace</i> , A.B.	Martha Philippa Williams, A.B.

School of Engineering.

(This school was organized in 1891. The graduates in the engineering courses preceding that date are repeated here.)

- Class of 1873.—Murray Harris, A.B.
 Class of 1874.—Ellis B. Noyes, A.B.
 Class of 1875.—Frank P. MacLennan, M.S.
 Class of 1877.—George Will Hapgood, B.S.
 Class of 1878.—Hugh Tudor Richards, C.E.
 Class of 1880.—Franklin Riddle, M.S., C.E.
 Class of 1881.—Edward Gleason Smith, B.S.
 Class of 1883.—Robert Murdaugh Osmond,* B.S.
 Class of 1884.—Albert Stanley Riddle, B.S.
 Class of 1885.—Henry Fremont Smith, B.S.
 Class of 1886.—Arthur L. Adams, B.S., Richard Birbeck, B.S., Frank Thompson Oakley, B.S.
 Class of 1887.—Robert Lynn McAlpine, B.C.E.
 Class of 1888.—Fred Holmes Bowersock, B.C.E., Paul Goddard, B.C.E., Owen Cyrus Le Seur, B.C.E., Frank John Savage, B.C.E., Clarence Elestus Springer, B.C.E.
 Class of 1889.—Joseph Jacobs, B.C.E., Alva Leslie Sloan, B.C.E.
 Class of 1890.—B. J. Dalton, B.C.E., Frederick Scott Pickering, B.C.E., Harry Radcliff, B.S., William Henry Reynolds, B.S., Richard H. Short, B.C.E., Leland DeForest Henshaw, B.C.E., Charles Stone McFarland, B.C.E., Edward Fisk Stimpson, B.S., Park Austin William son, B.C.E.

CLASS OF 1891.

Robert Anderson Rutledge, B.C.E.

CLASS OF 1892.

Eugene Wilson Caldwell, B.S.	Arthur Osborne Ridgeway, B.S.
Charles Warnock Frederick, B.S.	John Mason Robinson, B.S.

CLASS OF 1893.

Dennett Elijah Babbitt, B.S.	John Edward Curry, M.S., C.E.
Ernest Blaker, B.S.	Frank Ringer, B.S.
William Lester Brayton, B. S.	Roy Roscoe Rodgers, B.S.
Dana Templin, B.S., M.S.	

CLASS OF 1894.

Richard William Carter, B.S.	William Henry Kutz, B.S.
Lloyd Duffee, B.S.	Alfred Douglass Ludlow, B.S.
Herbert Henry Johnson, B.S.	Alanson Niles Topping, B.S.

CLASS OF 1895.

John Penn Cracraft, B.S.	* Charley Jacob Kitzmiller, B.S.
Arthur Ulysses Craig, B.S.	John Alouis Lahmer, B.S.
Arthur William Cunningham, B.S.	Hugh Graham Landis, B.S.
John Lyle Harrington, B.S., C.E.	Ned Ernest Newton, B.S.
James Judson Harding, B.S.	George Meade Soxman, B.S.
Geo. Thomas Herrington, B.S.	Orah Kilburn Williamson, B.S.
James Cezanne Kelsey, B.S.	Henry Jay Withington, B.S.

CLASS OF 1896.

George Rockwell Albers, B.S.	Lawrence Norton Morscher, B.S.
Charles Webster L. Armor, B.S.	Albert Vincent Schroder, B.S.
Charles Corwin Crew, B.S.	William John Squire, B.S.
Frederick Percy Daniels, B.S.	Henry William Wagner, B.S.

CLASS OF 1897.

Frederick Elmer Anderson, B.S.	William Luther Hancock, B.S.
Walter Thompson Brooks, B.S.	W. Roscoe O'Neill, B.S.
Herbert Frederick Cox, B.S.	Hans Von Unwerth, B.S.
Charles William Fletcher, B.S.	Alfred J. Wise, B.S.

Normal Department.

(This department was closed, by act of the legislature, in 1885.)

CLASS OF 1877.

Alla M. Barnes <i>Foster</i> , B.D.	Mary E. Murphy <i>Beckey</i> , B.D.
Mary A. Brannen, B.D.	Lizzie A. Stanley, B.D.
N. Elizabeth Burbank, B.D.	Emeline Upton <i>Vaughn</i> , B.D.
Mary R. Dillon <i>Miller</i> , B.D.	Anna L. Varney, B.D.
Karl A. Floden, B.D.	Eudora Wade <i>Garrett</i> , B.D.
Henry S. Harvey, B.D.	Charlotte C. Warren <i>Cahlan</i> , B.D.
	Almira Wood, B.D.

CLASS OF 1879.

Ella Pearson, B.D.	Alma Richardson <i>Wallace</i> , A.B., B.D.
Frank Preutiss, B.S., B.D.	Samuel M. Smith, A.B., B.D.

CLASS OF 1880.

Jessie A. Austin, A.B., B.D.	Ellen Hill, B.D.
Helen W. Bay <i>Raymond</i> , A.B., B.D.	Bion S. Hutchins, A.B., B.D.
Henry V. Chase, B.S., B.D.	Alfred E. Parker, B.S., B.D.
Abbie Coltrane, B.D.	Carrie M. Watson, A.B., B.D.

CLASS OF 1881.

Caroline Bauman <i>Spangler</i> , B.D.	Charles Dana Hawkins, B.D.
Lizzie Flora Farr, B.D.	Rosetta Haworth, B.D.
* Mary E. Gamble <i>Presby</i> , B.D.	Anna Lydia Moore, B.D.
	Charles Green Upton, B.S., B.D.

CLASS OF 1882.

Ella Kempthorne, B.D.	Emery Frederick Stanley, B.D.
Mary Belle Parker, B.D.	Lindley Murray Spray, A.B., B.D.

CLASS OF 1883.

Frank Howard Clark, B.D.	Mina E. Marvin <i>Wilcox</i> , A.M., B.D.
Eva Coltrane <i>Spray</i> , B.D.	Glen Lewis Miller, A.B., B.D.
Mary Ann Davis, B.D.	Ann Eliza Murphy, B.S., B.D.
Eveoline Gano, B.D.	George Earle Rose, B.D.
Chloe Haworth <i>Coyle</i> , B.D.	John Lincoln Shearer, B.D.
Edward C. Little, A.B., B.D., LL.B.	William S. Whirlow, B.S., B.D.

CLASS OF 1884.

Phebe Ashley <i>Clark</i> , B.D.	William H. Johnson, A.M., B.D.
Eugene L. Cowdrick, B.D.	*Emma Jane Kempthorne <i>Scott</i> , B.D.
Eva Halstead, B.D.	Charles Samuel Metcalf, B.D.
Margaret C. Hemphill <i>Smith</i> , B.D.	Lulu Miller <i>Smyth</i> , B.D.
Cora Viola Henshaw, B.D.	Elma Newby, B.D.
Nettie A. Hubbard <i>Boles</i> , B.S., B.D.	Augusta Hannah Pierson, B.D.
Minnie Clark Jay, B.D.	Olin Templin, A.M., M.S., B.D.

CLASS OF 1885.

Harriet Alice Black, B.D.	Harriet Clark Hulick, B.S., B.D.
Ada Eleanor Briggs, A.M., B.D.	Anna Elizabeth Loy, B.D.
Blanche Ketene Bruce, A.B., B.D.	Hiram Barton Martin, B.D.
Samuel Marion Cook, A.B., B.D.	Matthew Edgar Pierson, B.D.
Jennie Divelbess, B.D.	John Paul Rote, A.B., B.D.
*Flora Belle Eddy, B.D.	Martha Alice Thompson, B.D.
Millard Lincoln Field, B.D.	Harriet Tracy Williams, A.B., B.D.
Clara Greenameyer, B.D.	Ida May Wade <i>Starr</i> , B.D.

The School of Law.

ALUMNI ASSOCIATION.

JAMES M. CHALLISS, '94,	<i>President.</i>
HENRY A. LAMB, '97,	<i>Vice-President.</i>
A. G. CLARKE, '97,	<i>Secretary and Treasurer.</i>

CLASS OF 1880.

George M. DeGroff, LL.B.	Will J. Neill, LL.B.
Rufus U. French, LL.B.	Lucius H. Perkins, LL.B.
Thomas H. Kennedy, LL.B.	Samuel C. Usher, LL.B.
Frank E. Larimer, LL.B.	George W. W. Yates, LL.B.

CLASS OF 1881.

Leo James Barr, LL.B.	Arthur Lewis Hayes, LL.B.
Walter Mackey Duff, LL.B.	Benjamin Franklin Surface, LL.B.

CLASS OF 1882.

Arthur Cornforth, LL.B.	Charles Augustus Haskins, LL.B.
Joseph Mallen Gray, LL.B.	*John Thomas Harlow, LL.B.
Thomas Franklin Richmond, LL.B.	

CLASS OF 1883.

Willam Leonard Porter Burney, LL.B.	*Edwin Delmar Goodin, LL.B.
Ernest James Cooper, LL.B.	Numa Wesley Wells, LL.B.

CLASS OF 1884.

Leander L. Davis, LL.B.	Francis Wylie Marlin, LL.B.
Frank Exline, LL.B.	Harry Miller Marquis, LL.B.
Charles Frederick Foley, LL.B.	Ezra McCord Shinkle, LL.B.
James F. Major, LL.B.	*Howard Trego Smith, LL.B.

CLASS OF 1885.

Van Fremont Boor, LL.B.	Isaac Albert Rigby, LL.B.
James N. Davis, LL.B.	William Cornelius Spangler, LL.B.
James Alexander Hutcheson, LL.B.	Joseph Richard Turner, LL.B.
Joshua Wilson, LL.B.	

CLASS OF 1886.

John Henry Albach, LL.B.	Frank Day Hutchings, A.B., LL.B.
Harry Ballinger, LL.B.	Edward C. Little, A.B., LL.B., B.D.
William B. Brownell, A.B., LL.B.	Walter Cyrenus Stevens, LL.B.
John William Hall, LL.B.	Walter Winfield Scott, LL.B.
Elmer Ellsworth Hartley, LL.B.	Benjamin Franklin Talbott, LL.B.
James Booth Van Vliet, LL.B.	

CLASS OF 1887.

Isaac Francis Bradley, LL.B.	Benjamin F. Hutchins, LL.B.
Robert Woods Blair, LL.B.	William Jay Jackson, LL.B.
*Dan Andrew Crew, LL.B.	John Groff Miller, LL.B.
Joseph Thomas Dickinson, LL.B.	Samuel Wallace Moore, LL.B.
George Wendle Frolick, LL.B.	Frederick Shearer Pentzer, LL.B.
James Buchanan Harris, LL.B.	John Sullivan, LL.B.

CLASS OF 1888.

Alfred Fidler, LL.B.	Sterling Price King, LL.B.
Solon Thacher Gilmore, A.B., LL.B.	David Emory Palmer, LL.B.
Charles Ellsworth Harbaugh, LL.B.	Howard Allen Peairs, LL.B.
William Anthony Jackson, LL.B.	Emery Scott Rice, LL.B.
Benjamin Jacobs, LL.B.	John William Roberts, LL.B.
William Staples Wolley, LL.B.	

CLASS OF 1889.

Samuel D. Bishop, LL.B.	John Wilbur McIlravy, LL.B.
Edwin S. Earhart, LL.B.	Alexander Clark Mitchell, LL.B.
Cornelius Martin Enns, LL.B.	William Thomas Nelson, LL.B.
Willis Harry Finrock, LL.B.	Thomas Allen Pollock, LL.B.
Lee Moore Gray, LL.B.	Jesse Clayton Shuman, LL.B.
Grant W. Harrington, A.B., LL.B.	Lee C. Spooner, LL.B.
Bruno Hobbs, LL.B.	Louis Abyram Stebbins, LL.B.
Richard Scott Horton, LL.B.	John Martin Wayde, LL.B.

CLASS OF 1890.

Earnest L. Ackley, LL.B.	Thomas D. Leib, LL.B.
Cranston W. Butterworth, LL.B.	Joseph G. Littick, LL.B.
Albert Caughey, LL.B.	Daniel Mallison, LL.B.
Daniel J. Coy, LL.B.	Frank D. Merriam, LL.B.
Porter Edminster, LL.B.	James Nichols, LL.B.
Thomas J. Flannelly, LL.B.	Louis C. Poehler, LL.B.
Charles Farrow, LL.B.	Frank M. Power, LL.B.
William Henry Herdman, LL.B.	William W. Russ, LL.B.
Robert E. Lee Herdman, LL.B.	William H. Sears, LL.B.
Howard M. Hill, LL.B.	Percy C. Simons, LL.B.
Russell Whitelaw Houk, LL.B.	Charles W. Wallis, LL.B.
Wallace W. Lawton, LL.B.	Seba C. Westcott, LL.B.

Alva L. Wilmoth, LL.B.

CLASS OF 1891.

John Hames Boucher, LL.B.	Brett Wendell Jaquith, LL.B.
Clifford D. Bower, LL.B.	David Lewis Jones, LL.B.
Ella White Brown, LL.B.	Preston Rufus King, LL.B.
Austin Curtis Cunkle, LL.B.	Judah Lincoln Mack, LL.B.
Edward C. Dowling, LL.B.	John Paxton McLaughlin, LL.B.
Edward Clingan Finney, LL.B.	John Wesley Mertz, LL.B.
Thomas Anderson Finical, LL.B.	William Ludovic Palm, LL.B.
James Ammie Flint, LL.B.	*Walter Herbert Starkey, LL.B.
William Anderson Foster, LL.B.	John Stowell, LL.B.
Alvah John Graham, LL.B.	William Bolden Townsend, LL.B.
Francisco Antonio Gutierrez, LL.B.	Arthur Gordon Webster, LL.B.

CLASS OF 1892.

Herbert L. Armstrong, LL.B.	Frank George Jewett, LL.B.
Elmer Seward Bessey, LL.B.	John Jackson Jones, LL.B.
Jarvis Amos Blume, LL.B.	Orin Jacob Lmm, LL.B.
Eldie Franklin Caldwell, LL.B.	Ira Holmes Lookabaugh, LL.B.
Fred Walter Casner, LL.B.	Andrew Jackson May, LL.B.

William Sherman Cline, LL.B.
 Edward Reuben Fisher, LL.B.
 Jesse George, LL.B.
 Albert Covey Glenn, LL.B.
 Frank L. Graham, LL.B.
 Clad Hamilton, LL.B.
 Frank Oscar Hellstrom, LL.B.
 Fred S. Jackson, LL.B.
 Roscoe Howard Jaquith, LL.B.

Dennis H. Wilson, LL.B.

William Abram Pennington, LL.B.
 Isaac Adson Price, LL.B.
 Samuel Pettijohn Ridings, LL.B.
 Benjamin Milroy Russell, LL.B.
 James Rudolph Stanley, LL.B.
 Ernest Quincy Stilwell, LL.B.
 Thomas McClellan Sullivan, LL.B.
 Philip Logan Swartzell, LL.B.
 James Amizi Walker, LL.B.

CLASS OF 1893.

Fred Devere Boyce, LL.B.
 Solomon Ernest Bronson, LL.B.
 James Lancaster Byrnes, LL.B.
 William Thomas Dias, LL.B.
 Jesse James Dunn, LL.B.
 George Washington Ellis, LL.B.
 Gordon Louis Finley, LL.B.
 Walter Evans Gray, LL.B.
 Robert Morton Hamer, LL.B.
 Fred Prosser Hill, LL.B.
 Abqaham Lincoln Herr, LL.B.
 George Luther Hines, LL.B.
 Edward Everett Hopkins, LL.B.
 Charles Todd Kennedy, LL.B.
 Lester Kirk, LL.B.
 James Francis Lawson, LL.B.
 Charles Aubrey Locke, LL.B.
 Leonard Thomas Mahew, LL.B.
 Lawrence James Mason, LL.B.
 William Starrett McClintock, LL.B.

George Weldon Wolf, LL.B.

Robert William McGrath, LL.B.
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 Alexander J. Eicholtz, Ph.G. Herbert John Rankin, Ph.G.
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Louis House Bergman, Ph.G.	Nelson Hughes Seiler, Ph.G.
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William Vance Ingham, Ph.C.	William Henry Ringer, Ph.C.
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Herma Tabietha Kelly, Ph.C.	Daniel Hooker Spencer, Ph.C.
William Lange, Ph.C.	Frank Marion Sprague, Ph.C.
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School of Fine Arts.

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CLASS OF 1883.

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Susa Hubbard Breck.

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John Crogan Manning, M.G.

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Daisy Orton, Mus.B.

Jennie M. Weller, Mus.B.

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Jessie Hood, M.G.

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CLASS OF 1894.

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CLASS OF 1895.

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Newspapers and Periodicals for Reading Room.

DAILIES.

Emporia Daily Gazette.....	Emporia.
Evening Standard	Leavenworth.
Hutchinson News.....	Hutchinson.
Iola Daily Register.....	Iola.
Kansas City Journal	Kansas City, Mo.
Kansas City Gazette	Kansas City, Kan.
Kansas City Star	Kansas City, Mo.
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Lawrence Daily World.....	Lawrence.
Newton Daily Republican	Newton.
Salina Daily Republican-Journal	Salina.
Topeka State Journal.....	Topeka.
Wichita Daily Beacon	Wichita.

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Abilene Weekly Chronicle.....	Abilene.
Abilene Monitor	Abilene.
Abilene Reflector	Abilene.
Alliance Herald	Fredonia.
Alma Enterprise	Alma.
Anthony Republican	Anthony.
Arkansas Valley Democrat	Arkansas City.
Athenæum (Prof. A. M. Wilcox)	London.
Augusta Press	Augusta.
Baldwin Bee	Baldwin.
Baxter Springs News	Baxter Springs.
Beloit Gazette	Beloit.
Blue Mound Sun.....	Blue Mound.
Blue Rapids Times	Blue Rapids.
Burlington Courier	Burlington.
Burlington Republican.....	Burlington.
Caney Chronicle	Caney.
Chetopa Advance	Chetopa.
Christian Register.....	Boston, Mass.
Clay Center Dispatch.....	Clay Center.
Clark County Clipper.....	Ashland.
Colony Free Press	Colony.
Concordia Daylight	Concordia.
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Council Grove Republican	Council Grove.
Democratic Messenger.....	Eureka.
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Dillon Republican	Dillon.
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Galena Republican	Galena.
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Great Bend Register	Great Bend.
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Holly Chieftan.....	Holly.
Holton Recorder.....	Holton.
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Horton Headlight.....	Horton.
Howard Courant.....	Howard.
Industrialist	Manhattan.
Junction City Sentinel.....	Junction City.
Junction City Tribune.....	Junction City.
Kansas Advocate and News.....	Topeka.
Kansas Agitator	Garnett.
Kansas Agriculturist.....	Wamego.
Kansas City Gazette.....	Kansas City, Kan.
Kansas City Mail.....	Kansas City, Mo.
Kansas Democrat.....	Hiawatha.
Kansas Farmer.....	Topeka.
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Lawrence Germania.....	Lawrence.
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Linn County Republic.....	Mound City.
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McPherson Republican.....	McPherson.
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Minneapolis Messenger.....	Minneapolis.
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New York Voice	New York city.
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Phillipsburg Herald.....	Phillipsburg.
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Ponca City Courier.....	Ponca City, O. T.
Progressive Thought.....	Olathe.
Republican Traveler.....	Arkansas City.
Rooks County Record	Stockton.

Russell Record.....	Russell.
Salina Weekly Union.....	Salina.
Seneca Courier-Democrat.....	Seneca.
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Topeka Mail and Breeze.....	Topeka.
The Better Way.....	Minneapolis.
The Bible Reader.....	Richmond, Va.
The Kansas Endeavorer.....	Newton.
The Light.....	Greeley.
The Press.....	Miltonvale.
The Torch of Liberty.....	Mound City.
Tonganoxie Sentinel.....	Tonganoxie.
Union Signal.....	Chicago, Ill.
United Presbyterian.....	Pittsburg, Pa.
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Washington Watchman.....	Washington.
Waverly Gazette.....	Waverly.
Western Spirit.....	Paola.
Weekly Call.....	Topeka.
Western Odd Fellow.....	Topeka.
Wellington Monitor-Press.....	Wellington.
Westmoreland Recorder.....	Westmoreland.
Wheaton Courier.....	Wheaton.
Wilson County Citizen.....	Fredonia.
Wichita Eagle.....	Wichita.
Winfield Courier.....	Winfield.
Wyandotte Herald.....	Kansas City, Kan.

MONTHLIES.

Advocate of Peace.....	Boston, Mass.
Bulletin of the American Mathematical Society (Prof. E. Miller).....	New York.
Johns Hopkins University Circulars.....	Baltimore, Md.
Kansas Churchman.....	Lawrence.
Kansas Suffrage Reveille.....	Le Roy.
Merck's Bulletin.....	New York.
Modern Mexico.....	St. Louis, Mo., and Mexico City, Mex.
Musical Record.....	Boston, Mass.
Myers Bros.' Druggist.....	St. Louis, Mo.
National Druggist.....	St. Louis, Mo.
New England Druggist.....	Boston, Mass.
Ohio Meteorological Bureau, Report of.....	Columbus, Ohio.
Omaha Druggist.....	Omaha, Neb.
Pharmaceutical Era.....	Detroit, Mich.
Pharmaceutische Rundschau.....	New York.
Rocky Mountain Druggist.....	Denver.
Western Druggist.....	Chicago.
Western Drug Record.....	Kansas City, Mo.
Western School Journal.....	Topeka.

QUARTERLIES.

Acta Mathematica (Prof. H. B. Newson).....	Stockholm, Swed.
Annals of Mathematics.....	Washington, D. C.

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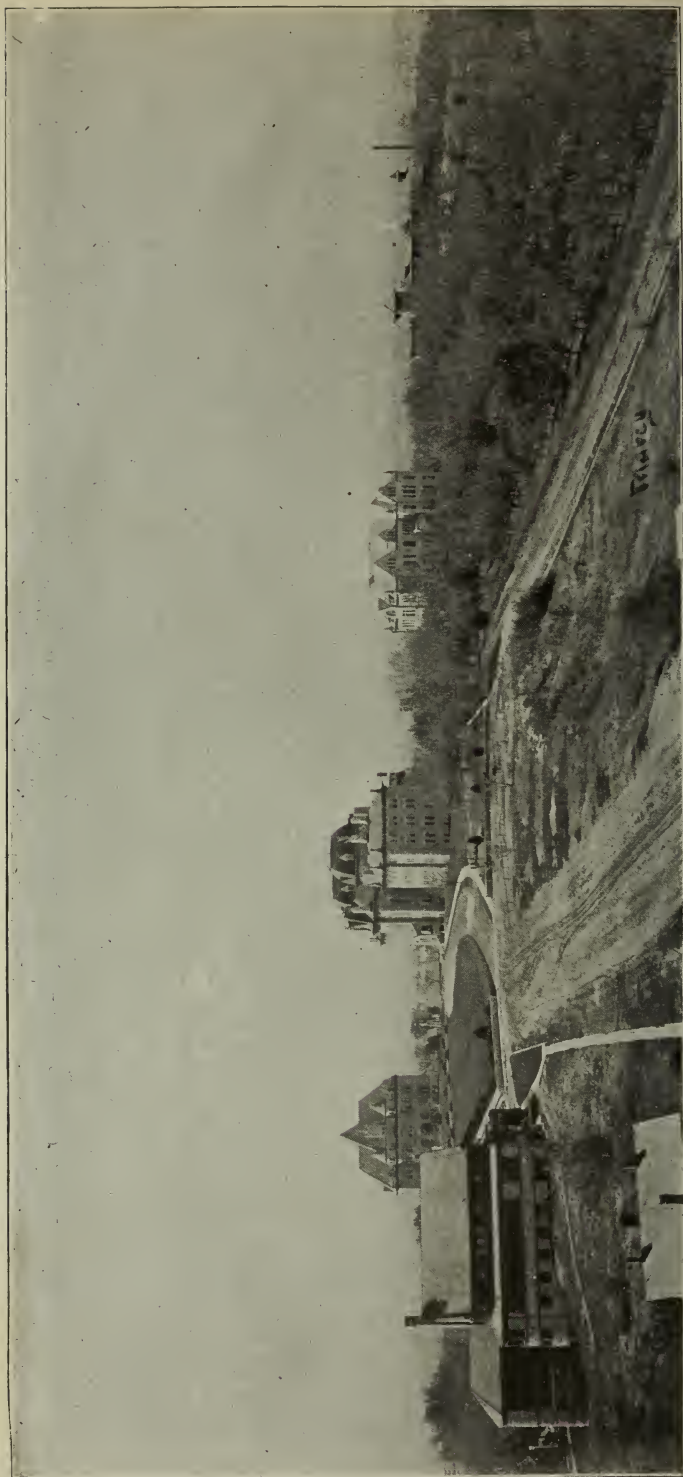
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GENERAL VIEW OF BUILDINGS AND GROUNDS.

THIRTY-THIRD
ANNUAL CATALOGUE

OF THE

University of Kansas

For the Year 1898='99.



LAWRENCE, KANSAS.

1899.

1899.							1900.						
JANUARY.							JULY.						
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Announcements.

For 1899.

- Jan. 9, Monday—Christmas recess ends.
Jan. 23 to 27, Monday to Friday, inclusive—Semiannual examinations.
Jan. 30, Monday—Second term begins.
March 29, Wednesday—First half term ends.
March 30 to April 3, Thursday, Friday, and Monday—Spring recess.
April 4, Tuesday—Second half term begins.
May 29 to June 2, Monday to Friday, inclusive—Annual examinations.
June 1, Thursday—Commencement concert, by Music department, School of Fine Arts.
June 4, Sunday, 8 P. M.—Baccalaureate sermon.
June 5, Monday, 8 P. M.—Phi Beta Kappa address.
June 6, Tuesday, 8 P. M.—Annual Alumni address.
June 7, Wednesday, 10:30 A. M.—Commencement exercises.
-

For 1899-1900.

- Sept. 6, Wednesday—First terms begins.
Sept. 6, 7, and 9, Wednesday, Thursday, and Saturday—Examination of candidates for admission, and presentation of certificates from high schools, academies, and other institutions.
Sept. 8, Friday—General assembly of students, and annual address in University Hall, at 10 A. M.
Nov. 9, Thursday—Second half term begins.
Nov. 23, 24, and 27, Thursday, Friday, and Monday—Thanksgiving recess.
Dec. 12, Tuesday, 8 P. M.—Christmas concert, by Music department, School of Fine Arts.
Christmas recess, Saturday, December 23, to Monday, January 8, inclusive.
Jan. 8, Monday—Christmas recess ends.
Jan. 22 to 26, Monday to Friday, inclusive—Semmiannual examinations.
Jan. 29, Monday—Second term begins.
March 28, Wednesday—First half term ends.
March 29 to April 2, Thursday, Friday, and Monday—Spring recess.
April 3, Tuesday—Second half term begins.
May 28 to June 1, Monday to Friday, inclusive—Annual examinations.
May 31, Thursday—Commencement concert, by Music department, School of Fine Arts.
June 3, Sunday, 8 P. M.—Baccalaureate sermon.
June 4, Monday, 8 P. M.—Phi Beta Kappa address.
June 5, Tuesday, 8 P. M.—Annual Alumni address.
June 6, Wednesday, 10 A. M.—Commencement exercises.

Organization and Government.

By act of Congress, approved January 29, 1861, seventy-two sections of land were set apart and reserved for the use and support of a State University in Kansas. The state accepted the trust, and in an act approved March 1, 1864, provided as follows:

"SECTION 1. There shall be established in this state, at or near the city of Lawrence, in the county of Douglas, on the grounds secured for that purpose pursuant to the act entitled 'An act to locate the State University,' passed February 20, 1863, an institution of learning, under the name of THE UNIVERSITY OF KANSAS.

"SEC. 2. The object of the University shall be to provide the inhabitants of this state with the means of acquiring a thorough knowledge of the various branches of literature, science, and the arts."

The legislature of the state made further provision for the University in an act approved February 25, 1889, and entitled "An act to provide for the government and maintenance of the University of Kansas." This act, repealing all former legislation bearing upon the same topics, continues the name of THE UNIVERSITY OF KANSAS, and its location at LAWRENCE, in DOUGLAS COUNTY. It further enacts —

That the University shall provide the means of acquiring a general and thorough knowledge in literature, the sciences, and the arts; and also provide students who desire to pursue special studies with the most approved appliances, authorities and instruction to insure the greatest knowledge and research in any special branch of learning connected with university education; that it shall consist of three departments: (1) A department of the literatures; (2) A department of the sciences; (3) A department of the arts; and that within these three departments there shall be established such schools as the Regents, in connection with the Faculty, may order. The same law further enacts that the government of the University shall be vested in a board of seven Regents, six of whom shall be appointed by the governor and confirmed by the senate, and whose term of office shall be four years; that the Board of Regents shall be a body corporate, under the name of "The Regents of the University

of Kansas," and as such may sue and be sued, make contracts, and hold and transfer property, both real and personal, for the University.

The Board of Regents is also invested with the power to elect a Chancellor, who shall be the chief officer of the University, and president of the Board of Regents, with the full power of a Regent; to appoint professors, assistants, tutors; to increase and diminish their numbers as the interest of the University may require; to employ a janitor, librarian, and such other officers and employees as in their judgment the needs of the University require.

The Board is also empowered to confer such degrees and grant such diplomas as are usually conferred and granted by other institutions of learning.

The Board of Regents.

CHANCELLOR F. H. SNOW.....	Lawrence.			
HON. WM. ROGERS.....	Washington.....	Term expires	1901	
HON. J. P. SAMS.....	Seneca.....	"	"	1901
HON. H. S. CLARKE.....	Lawrence.....	"	"	1901
HON. C. F. SCOTT.....	Iola.....	"	"	1903
HON. J. W. FORNEY.....	Belle Plaine.....	"	"	1903
HON. F. G. CROWELL.....	Atchison.....	"	"	1903

Officers of the Board.

F. H. SNOW	<i>President.</i>
J. P. SAMS.....	<i>Vice-President.</i>
C. F. SCOTT.....	<i>Secretary.</i>

Committees of the Board.

Instruction:

J. W. FORNEY.
C. F. SCOTT.
WM. ROGERS.

Library and Apparatus:

C. F. SCOTT.
H. S. CLARKE.
F. G. CROWELL.

Finance:

J. P. SAMS.
J. W. FORNEY.
H. S. CLARKE.

Buildings, Grounds, and Supplies:

WM. ROGERS.
J. P. SAMS.
F. G. CROWELL.

University Lands and Endowments:

H. S. CLARKE.
J. P. SAMS.
J. W. FORNEY.

Reports and Publications:

J. W. FORNEY.
C. F. SCOTT.
WM. ROGERS.

Auditing of Accounts:

F. G. CROWELL.
J. P. SAMS.
H. S. CLARKE.

Officers of the University.

F. H. SNOW	<i>Chancellor.</i>
W. K. FOLKS.....	<i>Secretary, Treasurer, and Purchasing Agent.</i>
E. F. ENGEL*.....	<i>Registrar.</i>
C. H. GOODRICH.....	<i>General Agent for University Lands.</i>
T. C. WHITE	<i>Superintendent of Buildings and Grounds.</i>

*GEORGE O. FOSTER has been appointed Registrar for the ensuing year.

Board of Instruction.

NOTE.—The names of the members of the Faculties are arranged in five classes—Professors, Associate Professors, Assistant Professors, Instructors, and Lecturers; and the place of each in its own class is determined by seniority of appointment.

FRANCIS HUNTINGTON SNOW, PH. D. (*Williams*), LL. D. (*Princeton*),
PRESIDENT.

Professor of Entomology and Organic Evolution, and Director of the Museum
of Natural History.

EPHRAIM MILLER, PH. D. (*Allegheny*),
Dean of School of Arts; and Professor of Mathematics and Astronomy.

JAMES WOODS GREEN, A. M. (*Williams*),
Dean of School of Law; and Professor of Constitutional Law, Contracts, Com-
mercial Paper, Insurance, and Corporations.

WILLIAM HERBERT CARRUTH, A. M. (*Kansas University*), PH. D. (*Har-
vard*), Professor of German Language and Literature.

FRANK OLIN MARVIN, A. M. (*Allegheny*),
Dean of School of Engineering; and Professor of Civil Engineering.

EDGAR HENRY SUMMERFIELD BAILEY, PH. B. (*Yale*), PH. D. (*Illinois
Wesleyan*),
Professor of Chemistry and Metallurgy.

ALEXANDER MARTIN WILCOX, PH. D. (*Yale*),
Professor of Greek Language and Literature.

LUCIUS ELMER SAYRE, PH. M. (*Philadelphia*), B. S. (*Michigan University*),
Dean of School of Pharmacy; and Professor of Pharmacy.

ARTHUR GRAVES CANFIELD, A. M. (*Williams*),
Professor of French Language and Literature.

LUCIEN IRA BLAKE, PH. D. (*Berlin*),
Professor of Physics and Electrical Engineering; and Director of Fowler Shops.

LEWIS LINDSAY DYCHE, A. M., M. S. (*Kansas University*),
Professor of Zoology, Taxidermist, and Curator of Mammals and Birds.

FRANK WILSON BLACKMAR, PH. D. (*Johns Hopkins*),
Dean of the Graduate School; and Professor of Sociology and Economics.

CHARLES GRAHAM DUNLAP, A. B. (*Ohio Wesleyan*), LITT. D. (*Princeton*),
Professor of English Literature.

THE UNIVERSITY OF KANSAS.

GEORGE BARLOW PENNY, B. S. (*Cornell*),
Dean of School of Fine Arts; and Professor of Harmony, Musical Composition,
and Organ.

SAMUEL WENDELL WILLISTON, A. M. (*Kansas Agricultural College*),
M. D., PH. D. (*Yale*),
Dean of School of Medicine; and Professor of Historical Geology and
Vertebrate Anatomy.

CARL ADOLPH PREYER (*Vienna*),
Professor of Piano, Counterpoint, Canon, and Fugue.

OLIN TEMPLIN, A. M., M. S. (*Kansas University*),
Professor of Philosophy.

FRANK HEYWOOD HODDER, PH. M. (*Michigan University*),
Professor of American History and Administration.

EDWIN MORTIMER HOPKINS, PH. D. (*Princeton*),
Professor of Rhetoric and English Language.

JOSEPH AUGUSTUS FARRELL (*Leipsic and Florence*),
Professor of Voice Culture, Singing, and Violin.

ALFRED HOUGHTON CLARK (*Boston Museum of Fine Arts*),
Professor of Drawing and Painting.*

ERASMUS HAWORTH, M. S. (*Kansas University*), PH. D. (*Johns Hopkins*),
Professor of Physical Geology and Mineralogy.

ARTHUR TAPPAN WALKER, A. M. (*Vanderbilt*), PH. D. (*Chicago*),
Professor of Latin Language and Literature.

WILLIAM CHASE STEVENS, M. S. (*Kansas University*),
Professor of Botany.

EPHRAIM DOUGLASS ADAMS, PH. D. (*Michigan University*),
Professor of European History.

ARVIN SOLOMON OLIN, A. B. (*Ottawa*), A. M. (*Kansas University*),
Professor of Education.

EDWARD CURTIS FRANKLIN, M. S. (*Kansas University*), PH. D. (*Johns Hopkins*),
Professor of Physical Chemistry.

HENRY BYRON NEWSON, PH. D. (*Ohio Wesleyan*),
Associate Professor of Mathematics.

*This professorship will be filled after the close of the present academic year by William A. Griffith (Jullien Art School, Paris).

JAMES NAISMITH, A. B. (*McGill University*), M. D. (*Gross Medical College*),

Associate Professor of Physical Training, and Chapel Director.

WILLIAM LIVESEY BURDICK, A. M. (*Wesleyan*), PH. D. (*Grant*),
LL. B. (*Yale*).

Associate Professor of Criminal Law, Domestic Relations, Partnerships, Sales,
Agency, and Bailments.

FRANK E. WARD,

Associate Professor of Electrical Engineering Shops.

EUGENIE GALLOO, B. L. (*Michigan University* and *University of France*),
A. M. (*Kansas University*),

Associate Professor of French and Spanish.

ARTHUR ST. CHARLES DUNSTAN, C. E. (*Alabama Polytechnic Institute*),
Associate Professor of Physics and Electrical Engineering.

MARSHALL ALBERT BARBER, A. B. (*Kansas University*), A. M. (*Harvard*),
Associate Professor of Cryptogamic Botany and Bacteriology.

GEORGE WAGNER, PH. C. (*Michigan University*),
Associate Professor of Pharmacy.

SAMUEL JOHN HUNTER, A. M. (*Kansas University*),
Associate Professor of Entomology.

WALTER KEIFER PALMER, M. E. (*Ohio State University*),
Associate Professor of Mechanical Engineering.

EDWARD BARTOW, A. B. (*Williams*), PH. D. (*Goettingen*),
Associate Professor of Chemistry.

CHARLES VICKREY, A. M. (*Kansas Normal College*),
Associate Professor of Elocution and Oratory.

DR. ALBERT P. MATHEWS (*Mass. Inst. Technology* and *Harvard Medical School*).

Associate Professor of Physiology.

MILES WILSON STERLING, A. M. (*Kansas University*),
Assistant Professor of Greek.

EDWARD CHARLES MURPHY, M. S., C. E. (*Cornell*),
Assistant Professor of Civil Engineering.

HANNAH OLIVER, A. M. (*Kansas University*),
Assistant Professor of Latin.

H. FOSTER JONES, A. B. (*Amherst*),
Assistant Professor of English.

ELMER FRANKLIN ENGEL, A. B. (*Kansas University*), A. M. (*Harvard*),
Assistant Professor of German, and Registrar.

MARTIN EVERETT RICE, M. S. (*Kansas University*),
Assistant Professor of Physics and Mathematics.

RAPHAEL DORMAN O'LEARY, A. B. (*Kansas University* and *Harvard*),
Assistant Professor of English.

CLARENCE ERWIN McCLUNG, A. B., PH. G. (*Kansas University*),
Assistant Professor of Histology.

FLORENCE EMMA PARROTT, A. B. (*Kansas University*),
Assistant Professor of German.

CORA MCCOLLUM SMITH,
Assistant Professor of Physical Training for Women.

ARCHIBALD HOGG, A. B., LL.B. (*Kansas University*),
Assistant Professor of Philosophy.

WILLIAM EDWARD HIGGINS, B. S., LL.B. (*Kansas University*),
Assistant Professor of Law.

WALTER RICHARD CRANE, A. M. (*Kansas University*),
Assistant Professor of Mining Engineering.

THOMAS M. GARDNER,
Assistant Professor of Mechanical Drawing.

IDA HYDE, B. S. (*Cornell*), PH. D. (*Heidelberg, Germany*),
Assistant Professor of Zoology.

HAMILTON PERKINS CADY, A. B. (*Kansas University*),
Assistant Professor of Chemistry.

.....
Assistant Professor of Sociology and Economics.

.....
Assistant Professor of French.

.....
Forge and Foundry Instructor.

HUGO KAHL (*Upsala University*),
Systematic Entomologist, and Curator of Entomological Collections.

E. GENEVE LICHTENWALTER, Mus. B. (*Kansas University*),
Instructor in Piano.

JAMES WILLIS GLEED, A. M. (*Kansas University*),
Lecturer on Real Property.

ALFRED WASHBURN BENSON,
Lecturer on Pleading and Practice.

SAMUEL AGNEW RIGGS, A. M. (*Washington and Jefferson*),
Lecturer on Torts and Law of Railways.

D. M. VALENTINE, ex-Justice of the Supreme Court,
Lecturer on Wills and Successions, including Probate Practice.

C. L. DOBSON, ex-Judge of the Circuit Court of Missouri,
Lecturer on Corporations.

DAVID MARTIN, ex-Chief Justice of Supreme Court of Kansas,
Lecturer on Evidence.

MARCUS SUMMERFIELD,
Lecturer on Equity Pleadings.

RALPH RAY PRICE, A. M. (*Kansas University*),
Student Instructor in European History.

ORIN F. STAFFORD,
Student Instructor in Chemistry.

CARRIE M. WATSON, A. B. (*Kansas University*)
Librarian.

*Orations and Addresses.**1898.*

BACCALAUREATE SERMON.

WILLIAM A. COLLEDGE, D. D.

ALUMNI ORATION.

ROBERT D. BROWN, A. B.

COMMENCEMENT ADDRESS.

JOHN H. BARROWS, D. D.

PHI BETA KAPPA ADDRESS.

ARTHUR G. CANFIELD, A. M.

ANNUAL ADDRESS AT THE OPENING OF THE UNIVERSITY YEAR.

ANGELO C. SCOTT, A. M.

The University.

THE UNIVERSITY OF KANSAS is as much an integral part of the public-school system of the state as is the high school or any of the grammar grades. The University is at the head of this system, and at this institution every attendant upon the lower grades is privileged some day to complete his education. Adhering strictly to the public-school-system idea, the courses of study of the majority of the high schools of the state are arranged in accordance with a plan of preparatory studies prescribed by the University. Students who complete this course of preparatory study are admitted to the University without examination. Men and women stand upon an equal footing, and students of either sex are admitted to all the privileges of the University without charge for tuition. The University now comprises the School of Arts, the School of Law, the School of Fine Arts, the School of Pharmacy, the School of Engineering, the School of Medicine, and the Graduate School.

Material Equipment of the University.

BUILDINGS.

North College.—This structure was the first building to be erected. It was completed in 1866, from which time until 1872 the entire work of the University was carried on within its walls. In 1872 the main building was completed, and North College was for a time closed. In 1890 it was again opened, and, until the end of the school year 1893-'94, was used by the School of Law. North College is fifty feet square, three stories high, and contains eighteen rooms. It is at present occupied and used by the School of Fine Arts.

Fraser Hall.—This building was erected in 1872, to better accommodate the growing school and to relieve the crowded rooms of North College. It is 246 feet in extreme length, ninety-eight feet wide in center, wings sixty-two feet each. There are fifty-four rooms in this building, of which one, the main audience room, containing the new electric pipe-organ, is ninety-four feet long and fifty-six feet wide. This room has a seating capacity of 1200. There are also in Fraser Hall eighteen lecture rooms, each large enough to accommodate classes of seventy-five to eighty students. In this building are located the offices of the University, including the Chancellor's office, the office of the Secretary and Treasurer, and the office of the Registrar. The north half of the first floor is devoted to the use of the School of Law, including the law library. In the basement

laboratories have been fitted up to relieve the overcrowded condition of the chemistry building.

The Chemistry Building is a structure in the form of a T, the main part extending east and west, being eighty by thirty-five feet, and the L north of this forty feet square. The east wing of the main structure is occupied as a lecture room capable of seating seventy-five students. The School of Pharmacy occupies the lower half of the building. Upon the completion of the new chemistry building, the present building will be occupied by the School of Medicine.

Snow Hall of Natural History.—Snow Hall is 110 feet in length by 100 feet wide, is provided with ample basement almost entirely above ground, two stories, each sixteen feet in the clear, and an attic of twelve feet. The west half of the building is occupied by the museums of the geological, zoölogical and paleontological departments. On the first floor of the east half is the lecture room, extending through the basement and first story, and arranged in amphitheater style. This room has accommodations for 200 students. On the second floor are the laboratories and collections of the departments of entomology and botany. The third floor is occupied by the department of zoölogy, and here also are the workrooms of the taxidermist. The first floor is given up to the department of geology and vertebrate anatomy. This building is furnished throughout with the best appliances for investigation and instruction in all branches of natural history, including fifty compound microscopes of the best manufacture.

Fowler Shops.—This building was completed the present year, at a cost of \$21,000, and is the gift of Mr. George A. Fowler, of Kansas City, Mo., as a memorial of his father. It is devoted to the mechanical and technical instruction of the School of Engineering, and to the electric light and power plants of the University. Its present educational equipment represents about \$20,000, appropriated by the last legislature. The building is of native stone, 224 feet long by 50 feet average width, two stories high, with attic and a handsome tower. It encloses 32,000 square feet of floor space for instructional purposes. It contains boiler- and engine-rooms equipped and adapted for boiler and engine testing, with generators aggregating 200 horsepower for lighting and power to all the University buildings; forge and brass-foundry rooms, metal- and wood-working departments, dynamo and transformer laboratory, with photometer room, fitted with recent types of appropriate machines so distributed as to give comprehensive and exact technical instruction. Two rooms, 50 x 30 feet, are devoted to the engineering laboratories of the Civil and Mechanical Departments. The pumping machinery of the water and fire-protection system of the University is also placed in the engine-room. A more detailed statement of the various equipments is given elsewhere, under the heading "School of Engineering."

Spooner Library.—This building was erected in 1894. It was built by means of the bequest of Wm. B. Spooner, of Boston. Its total cost was \$75,000. Its length is 112 feet and extreme width 50 feet. The building consists of two stories and a basement, the greater part of which is above ground. On the first or main floor are located the general reading room, a newspaper room, and the librarian's and cataloguer's offices. The reading room is admirably arranged and lighted. In the newspaper room are kept the county and city weeklies and dailies published within the state. In addition, dailies published in all the larger cities of the United States are kept on file. The second floor of the building contains a hall suitable for smaller audiences than are accommodated in University Hall. In the basement are seminary rooms used for private study of students in the various departments. The fire-proof book stack, with a capacity of 100,000 volumes, is an integral part of the building, and yet it is so cut off as to render its contents absolutely secure. The book stack consists of five stories, each eight feet high. The entire inside work, including floors, supports, and shelves, is of iron. The entire building is lighted throughout by electricity. Its every appointment is modern and its facilities and usefulness unexcelled.

The New Chemistry Building.—During the session of the legislature last winter, the sum of \$55,000 was appropriated for the construction of a Chemistry building. The plans, which have been decided upon, and are now in the hands of the architect, contemplate a building about 160 feet long and 70 feet wide in the widest portion, and three stories in height. This is to contain laboratories for general chemistry, qualitative analysis, quantitative analysis, physical chemistry, and organic chemistry. The first and second stories of the east wing will be occupied by the Pharmacy Department; here will be provided three large laboratories, a lecture room and a number of special rooms. In the upper story, in the east wing, will be situated the large lecture room of the Department of Chemistry. In the central portion of the building are rooms devoted to offices, store rooms, libraries, and special research laboratories. The plan contemplates a complete system of ventilation, by forcing hot or cold air into the rooms by means of fans and drawing it out through a large number of hoods upon the sides of the rooms. These hoods connect with chimneys extending above the roof or with exhaust fans in the attic. The rooms are to be heated partly by direct radiation and partly by the heated air that is blown in. The laboratories will be supplied with gas, water, blast, and vacuum, and high-pressure steam, and lighted by electricity. It is hoped that these laboratories and their facilities will be at the service of the students in the latter part of the ensuing year.

Physics and Electrical-Engineering Building.—This is of Chateau Renaissance style, three stories high, of Cleveland, Ohio, sandstone, and was completed September, 1895, at a cost of

\$58,000. Besides a general lecture room seating 100 and two class rooms seating thirty each, and a department reading room and library, there are two general laboratory rooms covering 3200 square feet. Accessible to these are supply, battery, workshop, balance and chemical rooms. There are also eight smaller rooms specially adapted for advanced physical research, each provided with water, gas, and electricity, and each basement laboratory room has a stone pier to bed-rock, making it free from vibrations of the building. Heavy electrical currents are so numerous and so planned that, to almost any laboratory room, all electrical currents from the dynamo station may be delivered. A sixty-cell storage battery is continually charged for laboratory work. The building is constructed without iron below the third story to avoid magnetic disturbances. The general apparatus room contains now about \$25,000 worth of demonstration and laboratory instruments. The building is heated by the Sturtevant forced-draft system, regulated by electric thermostats in each room. The air is changed automatically every fifteen minutes and in the lecture room every ten minutes. The total amount of floor space for research purposes is 5690 square feet.

APPARATUS OF INSTRUCTION.

The students in civil engineering are well provided with instruments for engineering operations in the field and the draughting room. This equipment consists of chains, tapes, compasses, engineers' transits of different forms, engineers' levels and leveling rods; aneroids; a transit, level of precision, and plane table, for geodetic surveying; rods, floats, and current meter, for measurement of the flow of streams; machine for testing the strength of cements; a 100,000-pound Olsen testing machine; an Olsen torsion machine of 50,000-inch pounds capacity; a complete Westinghouse air-brake equipment; models illustrative of problems in descriptive geometry; blue-printing apparatus; blue prints of bridge details and standard railway plans; photographs of bridges and pumping machinery.

In physics and electrical engineering, the equipment is added to by annual appropriations. About \$25,000 has been thus far expended. Recently large additions for original and precise experimentation have been imported, and it is believed a strong undergraduate course in laboratory work can now be carried out and much advanced research presented. The most accurate instruments of well-known best makers, both of this country and abroad, are provided, and the facilities of the Fowler engineering shops have allowed much new and original apparatus to be designed and constructed. It is the aim to keep demonstration and laboratory apparatus to the standard of the newest and best makes and to the needs of modern laboratory methods.

In astronomy the apparatus is not extensive, but in lieu of an observatory it answers its purpose. There belong to this department, (1) a telescope with an object glass of six inches, manufactured

by A. Clark & Sons, and costing \$1000; (2) a good sextant; (3) a new celestial globe of twenty inches diameter; (4) a large number of astronomical slides, representing the sun and sun spots, the moon, the planets, comets, nebulae, the constellations, variable and multiple stars, etc.

A good collection of plaster casts, models, photographs, plates, etc., has been made, as an aid to the study of the ancient and modern languages. Among these are plaster casts of some of the masterpieces of Greek and Roman sculpture. A model of the Acropolis, a model of the east pediment of the Zeus temple at Olympia, casts of the Theseus of the Parthenon, Venus of Melos, Hermes of Praxiteles, and the Augustus in military dress, may be specifically named.

In addition, this work and that in history, politics, sociology and education are furnished with maps, charts, illustrative apparatus, photographs, etc., very helpful to the student. To this apparatus of instruction additions are being constantly made.

Museums of Natural History.

F. H. SNOW, Director.

L. L. DYCHE, Curator of the Zoological Collections.

S. W. WILLISTON, Curator of the Paleontological Collections.

E. HAWORTH, Curator of the Mineralogical Collections.

W. C. STEVENS, Curator of the Herbarium.

S. J. HUNTER, Assistant in Entomology.

M. A. BARBER, Assistant in Cryptogamic Botany.

HUGO KAHL, Curator of the Entomological Collections.

C. E. MCCLUNG, Curator of Microscopical Preparation.

A. STEWART, Assistant in Paleontology.

C. D. BUNKER, Assistant in Zoological Museum.

ELLA WEEKS, Artist in Entomology.

The work in botany, entomology, zoölogy and geology is greatly aided by the illustrative opportunities afforded by the cabinet collections, which contain upwards of 200,000 specimens. These collections have been chiefly obtained during the past twenty years by University exploring parties in western Kansas, Colorado, New Mexico, British America, Alaska, and Greenland. By means of the material thus accumulated a system of exchange has been established with leading institutions and naturalists in all parts of the United States, so that the cabinets contain a very satisfactory representation of the plants, insects, mammals, birds, minerals, and fossils, not only of the state of Kansas, but also the whole of North America.

The herbarium includes upwards of 5000 species of plants, permanently protected from destruction by vermin, and systematically arranged for convenient examination by students and visitors. The method of arrangement is substantially the same as that adopted at Harvard University.

The entomological collection contains more than 15,000 species and 100,000 specimens, representing all the different orders of in-

sects. The instruction in this department has special reference to the discrimination of the beneficial from the injurious species, and the extensive collections are of practical value to the agricultural and horticultural interests of the state as well as to the students of the University in the determination of the names and habits of our insect friends and foes.

The collection of large mammals indigenous to the North American continent is one of the most complete in the world. The specimens have been collected from various parts of the continent, including a good series from Greenland, and the Atlantic coast as far north as Cape Sabine, and another series from the Pacific coast as far north as the Aleutian islands. Many of the large animals have been mounted and placed on exhibition in the University museums.

There are thousands of specimens in the shape of skins, skeletons and skulls which are packed away in drawers and cases for the want of space for proper exhibition. Most of these are available for students studying zoölogy and comparative anatomy, and are used by the professors to illustrate their various lectures.

The ornithological cabinets comprise upwards of 2500 specimens of birds, belonging to 500 different species. These specimens are carefully protected in moth-proof cases. A portion of them are unmounted skins, furnishing ample material for laboratory study when fresh specimens cannot be readily obtained.

A series of skeletons affords representative types for the study of osteology.

An alcoholic collection of marine radiates, mollusks and articulates from the Atlantic and Pacific coasts affords to the zoölogical students the means of investigating the anatomical structure of the leading forms in all the great "types" of the animal kingdom.

In the conchological cabinet are included nearly 1000 species of shells from all parts of the world.

The mineralogical and geological cabinets contain upwards of 100,000 specimens, chiefly from Kansas and the Rocky mountains.

The collections in paleontology offer the best facilities not only for instruction in general stratigraphic geology, but also for special advanced work in systematic paleontology. The collections of invertebrates include about 2000 species, distributed among about 500 genera. They represent all of the principal geologic formations, but are especially rich in Kansas forms. The numbers of genera and species from the chief geologic groups are nearly as follows:

Tertiary.....	80	genera,	200	species.
Cretaceous.....	80	"	200	"
Jurassic.....	10	"	30	"
Triassic.....	25	"	75	"
Permo-Carboniferous.....	60	"	600	"
Devonian.....	80	"	200	"
Silurian.....	75	"	250	"
Ordovician.....	90	"	250	"
Cambrian.....	20	"	30	"

The collection in paleobotany is especially rich and valuable, perhaps the most extensive in any university in America, numbering between 500 and 600 species, with thousands of specimens. The Dakota and Comanche Cretaceous series are the most extensive, and include many types of species and undescribed forms. In addition to the collection of Tertiary plants, there is a very large and valuable series of Carboniferous plants from Kansas, including many new forms yet unknown to science.

The collection of fossil vertebrates, with but three exceptions, is the most extensive in America, and in the Cretaceous forms is unequaled elsewhere. From the Miocene Tertiary of Kansas, Wyoming and South Dakota nearly all the known genera are represented. The Cretaceous animals are represented by many hundreds of specimens, including not a few of exceptional perfection and completeness. The Mosasaurs include five genera and twelve or fifteen species, showing in most of them the complete anatomy. Of fossil birds the best specimens known are in the museum, and some of the specimens of Pterodactyls and Plesiosaurs are unequaled in any other collection. From the Laramie Cretaceous the most notable specimen is a mounted skull of the gigantic dinosaur Triceratops, the only specimen of its kind outside of Yale and the National museums. From the Permian and Carboniferous there are also a number of valuable specimens. All together, about 400 species of extinct vertebrates are represented in the museum.

Valuable additions are constantly being made to the collections both of invertebrates and vertebrates, chiefly by field expeditions, of which there have been five during the past eight years.

The Library.

CARRIE M. WATSON, Librarian.
HELEN BINNINGER SUTLIFF, Assistant.
MABEL CLARE ROGERS, Assistant.
CLARA SCIOTO GILLHAM, Assistant.
EDITH M. CLARKE, Assistant.*
WILFRED WITHINGTON, Student Assistant.
JOHN M. CLOYES, Student Assistant.
EDWIN F. SHINN, Student Assistant.
CLARENCE DAVIS, Attendant in Law Library.

The University library, with the exception of the law library, is in the Spooner library building, used solely for library purposes. The law library is in the main building, adjoining the lecture rooms used by the law department. The University library is open every day of the year, excepting Sundays and legal holidays. Library hours are 8 A. M. to 6 P. M.; Saturdays, 8 A. M. to 3 P. M.

The most liberal facilities for using the library are offered to all members of the University. All books, except reference books and

* Miss DORA RENN will take the place of Miss Clarke at the beginning of the next academic year.

books too rare to be easily replaced, may be taken from the library by the student for three weeks.

The library is supplied with a card catalogue, which greatly facilitates the use of the books. The general reading room is a large, cheerful, comfortable and well-equipped room, lighted by 200 electric lamps, so that there is a perfect, evenly diffused light. Here may be found the general reference books, cyclopedias, dictionaries, card catalogue, and the more important journals and periodicals.

The library at present numbers 30,823 volumes, which are kept in the fire-proof stack room.

Several departments have seminary rooms in this building. Books upon the subjects under discussion in the class rooms are placed in these seminary rooms, where it is convenient for the students to use them.

An annual appropriation of \$5000 is devoted to the purchase of books. The books are selected with the greatest care, and the endeavor is made to furnish the students with the latest and best authorities in the various departments. While the library is not large, it is at all events sufficiently full to enable the student to prosecute research, and to furnish him substantial aid in his investigation.

School of Arts.

Faculty.

F. H. SNOW, *President*,
Organic Evolution.

E. MILLER, *Dean*,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

F. O. MARVIN,
Civil Engineering.

E. H. S. BAILEY,
Chemistry and Metallurgy.

A. M. WILCOX,
Greek.

L. E. SAYRE,
Pharmacy.

A. G. CANFIELD,
French.

L. I. BLAKE,
Physics.

L. L. DYCHE,
Zoology.

F. W. BLACKMAR,
History and Sociology.

C. G. DUNLAP,
English Literature.

G. B. PENNY,
Voice Training, Harmony, Musical Composition, and
History of the Fine Arts.

S. W. WILLISTON,
Historical Geology and Paleontology.

OLIN TEMPLIN,
Philosophy.

F. H. HODDER,
American History and Administration.

E. M. HOPKINS,
English Language.

A. H. CLARK,
Drawing.

E. HAWORTH,
Physical Geology and Mineralogy.

A. T. WALKER.
Latin.

W. C. STEVENS,
Botany.

E. D. ADAMS,
European History.

A. S. OLIN,
Pedagogy.

JAMES NAISMITH,
Physical Training.

E. C. FRANKLIN,
Chemistry.

H. B. NEWSON,
Mathematics.

EUGÉNIE GALLOO,
French and Spanish.

A. ST. C. DUNSTAN,
Physics.

M. A. BARBER,
Botany.

GEORGE WAGNER,
Pharmacy.

EDWARD BARTOW,
Chemistry.

S. J. HUNTER,
Entomology.

CHARLES VICKREY,
Elocution.

DR. A. P. MATHEWS,
Physiology.

M. W. STERLING, *Secretary*,
Assistant in Greek.

E. C. MURPHY,
Assistant in Civil Engineering.

HANNAH OLIVER,
Assistant in Latin.

H. FOSTER JONES,
Assistant in English.

E. F. ENGEL,
Assistant in German.

M. E. RICE,
Assistant in Physics and Mathematics.

R. D. O'LEARY,
Assistant in English.

FLORENCE E. PARROTT,
Assistant in German.

C. E. McCLUNG,
Assistant in Histology.

CORA McCOLLUM SMITH,
Assistant in Physical Training for Women.

ARCHIBALD HOGG,
Assistant in Physiology.

IDA HYDE,
Assistant in Zoology.

H. P. CADY,
Assistant in Chemistry.

Courses of Instruction.

Admission.

Every person who applies for admission to the Freshman class in the School of Arts is required to be examined in the various subjects mentioned below, or to present a certificate from high school, academy, or college, as explained under "Admission by Certificate." An applicant may be admitted, although deficient in some of these requirements, provided such deficiency does not exceed two terms' work. In this case, the student must make good one term's deficiency by the end of each term of his residence in the University, until the whole is made good. A student who fails to do this in any term is allowed to carry only two studies in the University during the following term.

Requirements for Admission.

1. *Physical Geography.*
2. *General History.* Myers, Sheldon, Barnes, or Fisher.
3. *Civil Government.* Thorpe and Hodder's Civil Government of the United States and of Kansas.
4. *Algebra*, through quadratic equations, radicals, and theory of exponents.
5. *Geometry.* Plane and solid.
6. *Physics.* Appleton's School Physics; Gage's Elements of Physics, Carhart and Chute's Elements of Physics, or equivalent.
7. In addition to the preceding, the candidate must offer one of the following groups:

- I. { English, three years.
Latin, three years.
- II. { English, one year.
Latin, three years,
and of either French, German, or Greek, two years.
- III. { English, two years.
Latin, three years.
Natural Science, one year, to be chosen from the following subjects: Botany, one-half year; *Zoology, one-half year; Chemistry, one-half year.

Beginning with the fall term of 1900, at which time group I will be discontinued, natural science, one year (in addition to physics),

*One-half of the term in zoology may be devoted to entomology, ornithology, animal anatomy, or some other special branch of zoology.

and two years of English will be required of all students who do not offer two foreign languages.

The "years" above referred to are explained below in detail:

ENGLISH.

One Year. The applicant must have devoted the equivalent of two periods or recitations weekly to the study of classics, and three periods weekly to the study of English composition, and must have a satisfactory knowledge of descriptive grammar and of grammatical analysis. He will be required to submit a list of the classics read in preparation for entrance, specifying which were read in class and which as collateral reading, and to write an essay, in length not less than 200 words, upon a subject designated by the examiner and connected with some book on the list submitted. This essay will constitute the final test as to his work in composition. In literature, the essay will be supplemented by questions as to the subject-matter of the works he has critically studied in class, and their relation to the author and his time. In grammar, a knowledge of the leading facts will be required, and the applicant will be required to analyze sentences not presenting idiomatic difficulties, and to criticize ordinary examples of ungrammatical expression.

The course recommended for examination in 1899 is as follows: For class study: Shakspeare, Macbeth; Milton, Paradise Lost, books I and II; Burke, Speech on Conciliation with America; Carlyle, Essay on Burns. For collateral home reading and composition work: Dryden, Palamon and Arcite; Pope's Iliad, books I, VI, XXII, and XXIV; Addison, Sir Roger de Coverley Papers, in the Spectator; Goldsmith, Vicar of Wakefield; De Quincy, Flight of a Tartar Tribe; Cooper, Last of the Mohicans; Lowell, Vision of Sir Launfal; Hawthorne, House of the Seven Gables.

For 1900 the list is the same as that for 1899, except that for the selection from Carlyle is substituted Macaulay's Essays on Milton and Addison; and for that from Hawthorne, Scott's Ivanhoe and Tennyson's Princess. For 1901 and 1902 the list is the same as that for 1900, except that Paradise Lost gives place to Milton's L'Allegro, Il Penseroso, and Comus; and Dryden's Palamon and Arcite to George Eliot's Silas Marner.

Two Years. In addition to the preceding requirements for one year, the applicant must have given one additional year, five periods weekly, to English classics and the history of English literature, language, and grammar; the greater part of the time to classics. In examination, he will be required to submit a list of about twenty classics critically studied in preparation for entrance, and to write a short essay upon a topic based upon some one of them and designated by the examiner. The examination proper will relate to details of style, subject-matter, purpose, and the historical relations of several of the classics read, to the general outline of English literary

history to the eighteenth century, and to language and grammar, as specified below.

Three Years. The requirements for three years are, in addition to those already given, three periods weekly of composition for one year, and one period weekly of rhetoric. (See diagram on following page.)

The examination in literature will be that specified in the two years' course. In rhetoric, the examination will relate to the elements of rhetorical theory, including the choice and use of words, the structure of sentences and paragraphs and of the complete discourse, including the making of outlines; and, in addition to the essay upon a literary topic, the applicant will be required to write another, narrative or descriptive, upon a subject based upon his own experience. In language, the examination will include the history of the English language, and in connection with it the important facts of grammatical history, especially such as have to do with the decay of inflections, with idioms, and with etymology.

The following diagram will make clear the nature and amount of the work required in English in each of the three courses, and it is recommended that the subjects in each course be arranged and distributed as shown on opposite page.

Text-books. The following text-books, or their equivalent, may be used as a basis for preparatory work: In rhetoric, Genung's Outlines of Rhetoric; in literature, any convenient editions of the twenty required classics and Pancoast's Introduction to English Literature; in language history, Lounsbury's History of the English Language, part I; and in the history of English grammar, Lounsbury's History of the English Language, part II.

For a list of other text-books, teachers' helps, suggested courses of study in literature, and full explanations of the nature of the work required in each course, see the "Circular Touching the Requirements in English," published by the University, and the supplementary circular relating to the two years' course, and to more recently published helps and text-books.

Certificates. Certificates from accredited high schools, if accepted for any course in English, must show in detail that the required amount of time has been given to each subject by the applicant, and that he has completed the outlined work with satisfactory standing.

FRENCH.

First Year. The translation at sight of easy French prose, and the writing of simple French sentences; a thorough knowledge of the conjugation of verbs, regular and irregular; and familiarity with the elementary principles of syntax (as much as is contained, for example, in the first part of Whitney's or Otto's Grammar).

Second Year. Thorough acquaintance with French grammar; ability to read readily at sight; knowledge of some period of French literature, based upon the reading of its representative works.

WORK REQUIRED IN ENGLISH.

STUDIES.	First Year.		Second Year.		Third Year.	
	First term.	Second term.	First term.	Second term.	First term.	Second term.
ONE-YEAR COURSE.	3 periods.	3 periods.				
	2 periods.	2 periods.				
TWO-YEAR COURSE.	2 periods.	2 periods.	1 period.	1 period.		
	3 periods.	3 periods.	2 periods.	1 period.		
	.....	.....	.....	1 period.		
	.....	.....	2 periods.	2 periods.		
		
THREE-YEAR COURSE.	3 periods.	3 periods.	2 periods.	2 periods.	1 period.	1 period.
	.....	.....	1 period.	1 period.	2 periods.	1 period.
	2 periods.	2 periods.	2 periods.	2 periods.	.....	1 period.
	.....	.....	.....	.....	2 periods.	2 periods.
	.....	.....	.....	.....	.....	2 periods.

GERMAN.

First Year. Grammar (Otis). Thorough drill in the declension of nouns and adjectives, and in the conjugation of verbs, both regular and irregular; translation of simple English sentences into German. Reader (Brandt), 100 pages, with careful attention to points of grammar and syntax. Dictation of simple German prose.

Second Year. Reader (Brandt completed), Wilhelm Tell (Car-

ruth's text). Sight-reading (*Der Zerbrochene Krug*). Exercises in composition and dictation.

GREEK.

First Year. White's Beginners' Greek Book, Gleason and Atherton's First Greek Book, or Frost's Greek Primer, or an equivalent.

Second Year. Xenophon's Anabasis, two books, or their equivalent.

In place of the above two years' work, the candidate may offer: The translation at sight of simple Attic prose, with questions on the usual forms and ordinary construction.

LATIN.

First Year. Grammar and reader.

Second Year. Cæsar's Gallic War, four full books, or an acceptable equivalent, and two of Cicero's Orations; the translation into Latin of sentences founded upon Cæsar and Cicero.

Third Year. Four of Cicero's Orations, Vergil's *Æneid*, five books; the translation into Latin of sentences founded upon Cicero.

After 1899 all certificates must include the statement that the candidate has completed the amount of Latin prose composition contained in such books as Bennett's Latin Composition or Moulton's Preparatory Latin Composition. Otherwise the candidate will be examined in the subject.

One of the advanced students in Latin is appointed each year as private tutor. Students who enter with conditions in Latin are recommended to arrange for work with him, and the results of his examinations are accepted by the department. Students who work under any other private tutor are examined by the department.

Admission by Certificate.

I. Students will be admitted into the Freshman class upon the certificate of the president, superintendent or principal of any college, academy, or other incorporated institution of learning, or of any public high school of the state, showing that such students have completed all the preparatory prescribed studies as laid down in the University catalogue.

II. Students who present certificates in accordance with the above regulations, showing that they have completed all the required preparatory studies except two terms' work, will be admitted with conditions, without examination. All entrance deficiencies must be made good within one year from the time of admission.

Candidates for admission who do not present certificates in accordance with the above regulations will be received into the University only on examination.

Blank certificates of admission will be sent on application to the Registrar. Every student must present such certificate before he can be registered.

STATE HIGH SCHOOLS.

I. Names of high schools reporting courses which fully prepare for the Freshman class, School of Arts, are as follows:

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Abilene.....	J. H. Niesley.....	W. H. Wagner.
Alton, Ill.....	R. A. Haight, A. M.....	J. E. Turner, A. M.
Argentine	A. P. Warrington.....	Margaret Rush, A. B.
Arkansas City.....	W. M. Fisher, A. M.....	Helen M. Moffet, A. B.
Atchison	J. H. Glotfelter.....	C. A. Shively.
Atchison Co., Effingham..	.....	J. W. Wilson, A. B.
Belleville.....	C. C. Canfield.....	Emma F. Rasger.
Beloit	Harold Barnes, A. B.....	C. E. Shutt, A. M.
Blue Rapids.....	G. B. Buikstra, A. B.....	G. B. Buikstra, A. B.
Burlingame.....	E. W. Myler.....	Roy Holtz, A. B.
Burlington	L. D. Ellis, A. B.....	L. D. Ellis, A. B.
Caldwell	Ira E. Swain.....	Carrie Perry.
Carbondale.....	J. T. Albin, A. M.....	J. T. Albin, A. M.
Cawker City.....	L. J. Hall.....	L. J. Hall.
Centralia	B. E. Lewis, M. S.....	B. E. Lewis, M. S.
Cherryvale	E. A. Herod.....	E. J. Castello.
Clay Center.....	B. F. Merten	W. S. Heusner, A. B.
Coffeyville	Frank McClellan, A. B..	W. E. Ringle, A. B.
Columbus.....	E. L. Enloe	O. C. Ecke.
Concordia	A. B. Carney.....	Ida R. Wilcox.
Cottonwood Falls.....	D. F. Shirk	D. F. Shirk.
Council Grove.....	J. E. Edgerton, A. B.....	T. M. Wood.
Delphos.....	T. H. Scheffer, A. B.....	T. H. Scheffer, A. B.
Dickinson Co., Chapman, .....	.....	D. E. Lantz, M. S.
Dodge City.....	.....	H. A. Cord.
Downs.....	W. B. Flanders, B. S.....	W. B. Flanders, B. S.
Ellsworth	E. T. Fairchild.....	Daisy Zeininger.
Emporia.....	L. A. Lowther, A. M.....	J. D. Barnett, A. M.
El Dorado.....	L. Tomlin	L. Tomlin.
Florence.....	N. T. Adams, A. B.....	Alberta R. Cavin, A. B.
Fort Scott.....	D. M. Bowen.....	W. C. Lansdon.
Frankfort	T. P. Bogar	Harriett Landers.
Fredonia	J. R. Thierstein, A. B....	H. S. McFadden,
Galena	T. B. Mosher.....	Mrs. S. C. Powell.
Garden City.....	A. C. Wheeler.....	C. H. Rhodes.
Garnett.....	Homer S. Myers, A. M....	C. H. Oman.
Girard	H. C. Ford.....	A. T. St. Clair.
Great Bend.....	Warren Baker	Alice Reynolds.
Gypsum City.....	.....	J. Earle Frisselle.
Halstead.....	Ed. T. Barber.....	T. P. Detamore.
Harper.....	Theo. Fulton	P. N. Heck.
Hartford.....	.....	A. Sweezey, A. B.
Hays City .....	.....	Walter E. Johnson, A. B.
Herington.....	A. W. Hiner.....	Clara Williams.
Hiawatha.....	E. O. Leatherwood	William Redmond, A. B.
Holton	E. E. Heath, A. B.....	E. L. Higinbothom.
Horton	J. E. Dyche, A. B.....	W. S. McCroskey, A. B.
Howard.....	C. W. Pratt	C. A. Katherman, A. M.
Humboldt.....	A. H. Newton	U. Jarrett.

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Hutchinson.....	G. W. Winans.....	Mrs. E. H. Richardson.
Independence.....	S. M. Nees.....	S. A. M. Young, A. B.
Iola.....	W. J. Hull.....	C. A. Mitchell.
Junction City.....	G. W. Kendrick.....	G. L. Towne, A. B.
Kansas City.....	L. E. Wolfe.....	G. E. Rose.
Kansas City, Mo.....	J. M. Greenwood, LL. D.	E. C. White, A. M.
Kingman.....	Glen O'Brien.....	Mayme K. White, A. M.
Labette Co., Altamont...	.....	W. M. Kyser, A. B.
La Cygne.....	W. A. Stacey, B. S.....	W. A. Stacey, B. S.
Lakin.....	E. G. Griswold.....	E. G. Griswold.
Lawrence.....	F. P. Smith, A. M.....	F. H. Olney, A. B.
Leavenworth.....	Miss M. E. Dolphin.....	W. A. Evans.
Lincoln.....	.....	C. N. Poe, A. B.
Lyndon.....	L. A. Parke.....	Rachel H. Watson, A. B.
Lyons.....	F. C. Jacoby, A. M.....	Mary Schmalzried.
Marion.....	B. D. Van Ostrand, B. S.	R. M. Williams.
Marysville.....	R. McKelvey.....	G. F. Gorow.
McPherson.....	T. S. Johnson.....	Laura E. Humphrey.
Minneapolis.....	G. R. Crisman, A. B.....	C. A. Wagner, A. B.
Moline.....	Richard Allen.....	Richard Allen.
Mound City.....	B. F. Ader, B. S.....	B. F. Ader, B. S.
Newton.....	J. W. Cooper.....	D. R. Krehbiel, A. B.
Norton.....	H. M. Culter.....	Laura Branson.
Oberlin.....	H. O. Caster, Ph. B.....	Alice B. Frazey, A. B.
Olathe.....	S. W. McGarrah, A. M....	H. P. Butcher, A. B.
Oklahoma City, O. T.....	B. F. Nihart, A. B.....	M. J. Patterson, B. S.
Osage City.....	C. G. Messerly, A. B.....	W. G. Magaw, A. B.
Osawatomie.....	H. H. Ewing, B. S.....	Sadie B. Mann, A. B.
Osborne.....	J. B. McClure.....	Theressa Comfort.
Oskaloosa.....	D. L. Stanley.....	D. L. Stanley.
Oswego.....	C. H. Williams.....	H. W. Todd.
Ottawa.....	W. H. Olin, M. S.....	W. A. La Bar.
Paola.....	E. A. Farrington, A. B....	F. W. Allin, B. S.
Parsons.....	H. Winsor.....	Roxie E. Clark.
Peabody.....	A. H. Bushey.....	A. H. Bushey.
Pittsburg.....	R. S. Russ.....	W. R. Blair.
Phillipsburg.....	T. C. Coffman, A. B.....	T. C. Coffman, A. B.
Pleasanton.....	J. B. Cheadle, A. B.....	E. F. Haven, A. B.
Pratt.....	J. A. Frazier, A. B.....	Carrie L. Kelson.
Quenemo.....	W. H. Carney, A. M.....	W. H. Carney, A. M.
Russell.....	E. L. Cowdrick, B. D.....	Laura J. Finley.
Sabetha.....	I. B. Morgan.....	I. B. Morgan.
Salina.....	A. Ludlum.....	Mrs. M. A. Ludlum.
Sedan.....	J. A. Ferrell, B. S., C. E.,	H. G. Adams, B. S., B. O.
Sedgwick.....	.....	E. L. Hillis.
Seneca.....	C. C. Starr, B. S.....	Lydie Orem,
Solomon.....	S. S. Owen, A. B.....	Carrie Matson.
Smith Center.....	W. A. McKeever, A. M....	F. L. Platt, A. B.
St. Francis.....	.....	G. M. Lanver, M. S. D.
St. Mary's.....	A. L. Bell, Ph. B.....	A. L. Bell, Ph. B.
Sterling.....	.....	.....
Stockton.....	.....	H. O. Williams.
Sumner Co., Wellington..	.....	T. W. Butcher, A. B.
Thayer.....	.....	Sumner Risdon, A. B.
Thomas county, Colby....	.....	W. G. Riste.
Topeka.....	W. M. Davidson.....	L. D. Whittemore, A. M.
Troy.....	.....	E. P. McMahon.
Valley Falls.....	J. W. Lakin, A. B.....	Eleanor M. Gephart, A. B.

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Union H. Sch'l, Wathena, .....	.....	G. W. Kinkead.
Wamego.....	J. H. Sawtell	Ada Pixley.
Warrensburg, Mo.....	L. W. Martin, A. B.....	J. M. Gordon, B. S. D.
Washington.....	H. W. Charles	C. B. Van Horn.
Waterville.....	J. H. Naff.....	C. Fletcher Clark, A. M.
Waverly.....	C. M. Rose	Agnes E. Graham.
White Cloud.....	.....	C. S. Hambleton.
Wichita.....	Frank R. Dyer, A. M.....	Frank R. Dyer, A. M.
Winfield	J. W. Spindler	S. C. Bloss. A. B.
Yates Center.....	A. H. Epperson.....	A. M. Kannard.

Total in list I, 117.

ACADEMIES.

<i>Name of academy.</i>	<i>Location.</i>	<i>Principal.</i>
Friends'	Washington.....	A. W. Jones, A. M.
Arkansas City.....	Arkansas City.....	L. E. Eddy, M. S.
Hiawatha.....	Hiawatha	L. E. Tupper, A. M.
Kansas Christian College,	Lincoln	O. B. Whitaker, M. S., A. M.
Lewis.....	Wichita	J. N. Naylor, Ph. D.
Lowell.....	Lowell.....	C. E. Cosand.
Southern Kansas.....	Eureka.....	J. W. Scraggs, A. M.
Tonganoxie	Tonganoxie.....	A. E. Jones.
Wentworth Military.....	Lexington, Mo.....	Sanford Sellers, A. M.
North Branch.....	North Branch.....	A. H. Symons, B. S.

Academies in list I, 10.

II. Names of high schools which fall short of preparing for the Freshman class, School of Arts, by not more than the amount of two terms' work, are as follows:

<i>Name of high school.</i>	<i>Superintendent.</i>	<i>Principal.</i>
Alma .....	.....	C. C. Chapman.
Burton	H. C. Campbell	H. C. Campbell.
Attica.....	.....	C. H. Ewing.
Augusta.....	.....	W. J. Spier, B. S.
Chanute.....	Sallie Ellis.....	Agnes Radford, B. A.
Chetopa.....	M. Nellie McGinley.....	—
Clyde.....	S. V. Mallory	—
Erie.....	E. L. Rosebush.....	C. S. Swain.
Enterprise	H. M. Ambrose, A. M....	—
Eureka.....	G. A. Bower.....	Jessie Brookover.
Glasco.....	G. H. Bernard, B. S.....	—
La Crosse.....	George N. Witt.....	George N. Witt.
Mound Valley.....	A. G. Lovett, A. M.....	S. L. Fogleman.
Mankato.....	.....	D. K. Thomas, Ph. B.
Moran.....	.....	C. W. Kline.
Scranton.....	.....	A. L. Edwards.
Stafford.....	.....	J. M. Colburn.
Winchester.....	I. J. Bradford.....	W. L. Dunbar.
Wilson	Dallas Grover, A. M....	N. Coover.

Total in list II, 19.

Special Students.

Persons of mature years (at least twenty-one years of age) and character, who desire for reasons satisfactory to the Chancellor or Faculty to pursue some special line of study, without becoming candidates for a degree, are allowed to enter as special students. Such students must file with the Registrar of the University, prior to enter-

ing classes, a statement of the work which they desire to pursue, and a written statement from the instructors under whom work is to be carried that the student is prepared to undertake the work specified. With the advice and consent of the Faculty, special students may carry other studies than that in which they are specializing, provided such studies are closely connected with their special work and necessary to it.

Special students are subject to the same regulations as regular students with regard to the quality of work performed, and attendance at recitations and examinations, but not as to the number of studies to be pursued. The Faculty may at any time deprive any special student of his privileges if it appears that he is abusing or neglecting them.

Registration.

All candidates for admission to the Freshman class having high-school certificates, and all students of the University intending to pursue their studies in the ensuing year, must present themselves for registration at the University on Wednesday and Thursday, September 6 and 7, 1899. Registration at a later date will be permitted only on the presentation of a satisfactory reason for the delay.

Times and Places of Examination.

Candidates for the Freshman class not presenting the required certificates will be examined at the University, Lawrence, either on Thursday, Friday, and Saturday, June 8, 9, and 10, 1899, or on Wednesday, Thursday, and Friday, September 6, 7, and 8, 1899. Candidates will be examined at other times only on giving to the Registrar a satisfactory reason for non-attendance at the appointed examinations. The following is the schedule of examinations in June and September:

THURSDAY, JUNE 8, OR WEDNESDAY, SEPTEMBER 6.

- 9-10. English.
- 10-11. Algebra.
- 11-12. French.
- 12-1. Physical Geography.
- 2-3. German.
- 3-4. Civil Government.

FRIDAY, JUNE 9, OR THURSDAY, SEPTEMBER 7.

- 9-10. Geometry.
- 10-11. Latin.
- 11-12. Outlines of History.
- 2-3. Greek.
- 3-4. Physics.

SATURDAY, JUNE 10, OR FRIDAY, SEPTEMBER 8.

- 8-9. Botany.
- 9-10. Chemistry.
- 12-1. Zoölogy.

Candidates for admission may divide the examination between two years, or between June and September of the same year, under the following conditions: The applicant may present himself at the preliminary for examination in any or all of the prescribed subjects, and if he is successful in five or more subjects, he need not be again examined in them.

Admission to Advanced Standing.

I. *By Examination.* A candidate may be admitted to the Sophomore, Junior, or Senior class, if he appear on examination to be prepared in the following studies: (1) In the studies required for admission to the Freshman class. (2) In all prescribed studies already pursued by each class for which he offers himself; and in as many optional studies as he would have pursued if he had entered at the beginning of the course.

II. *Without Complete Examination.* Graduates or students from the higher classes of other colleges may be admitted to advanced standing upon the presentation of a certificate stating in detail the work done, under such conditions as the Faculty may determine to be just in each case, upon consideration of the applicant's previous course of study, and of the evidence he presents of his proficiency in that course. For information on this subject, application should be made to the Registrar of the University.

Undergraduates from other colleges must present certificates of honorable dismissal, or other satisfactory evidence of good character.

It is required of all candidates for the first degree that the last year be spent in residence at the University.

Course of Study Leading to the Degree of Bachelor of Arts.

The following is an outline of the studies prescribed for the degree of bachelor of arts. These studies are described more in detail in the account of courses offered by the several departments. The Roman numerals below correspond to the numerals used in the detailed account of courses:

FRESHMAN YEAR—FIRST TERM.

Group A: English *B* I; French I, III, V; German I, III, V; Greek I, III, V; Latin I, III.

Group B: Mathematics I (Algebra and Plane Trigonometry).

Group C: Elocution or Voice Training, once a week.

Hygiene, once a week.

Physical Training and Military Drill, three times a week.

Every Freshman is required to carry two courses in A, and all of B and C.

Students offering three years of English for entrance will not take English *B* I, but must substitute a second course from A, or English history or Zoölogy I from Sophomore B.

Students entering with only one or two years of English who have not satisfied the department of English of their ability to write good English are required to take English *B* I.

FRESHMAN YEAR—SECOND TERM.

Group A: French II, IV, VI; German II, IV, VI; Greek II, IV, VI; Latin II, IV.

Group B: English *A* I.

Botany I or Zoölogy II.

Chemistry IV.

Mathematics II (Spherical Trigonometry and Theory of Equations).

Group C: Elocution or Voice Training, once a week.

Physical Training and Military Drill, three times a week.

Every Freshman is required to carry one course in A and all of C. An option of any two courses in B is permitted to all students; provided, first, that English *A* I may be elected by those students only who offer but one year of English for entrance; and second, that students offering botany and chemistry for entrance will take a second course from Freshman A or Sophomore B.

SOPHOMORE YEAR—FIRST TERM.

Group A: French I, III, V; German I, III, V; Greek I, III, V; Latin I, III.

Group B: Mathematics III (Analytics).

English History.

Zoölogy I.

Chemistry V.

Botany II.

Logic and Psychology.

Group C: Physical Training and Military Drill, three times a week.
Three themes of 1000 words each.

SOPHOMORE YEAR—SECOND TERM.

Group A: English A II; French II, IV, VI; German II, IV, VI; Greek II, IV, VI; Latin II, IV.

Group B: Mathematics IV (Calculus).

Logic and Psychology.

Surveying.

Botany I, when not taken in Freshman year,
or Zoölogy II.

Chemistry IV, when not taken in Freshman year.

Mathematics II, when not taken in Freshman year.

Group C: Physical Training and Military Drill, three times a week.
Three themes of 1000 words each.

Every Sophomore will take all of C and will elect any six courses from A and B; provided, that not more than four courses shall be from either group.

At the end of the Sophomore year, every student must have done some work in the school in at least two languages other than English.

By the end of the Sophomore year, every student must have done, either in the preparatory schools or in the University, at least one year's work in the biological sciences and one-half year's work in chemistry.

JUNIOR AND SENIOR YEARS.

Each Junior and Senior is required to write two forensics, or equivalent theses, each term, in addition to which he must pursue in each term three full studies, or their equivalent, chosen by himself from the list of optional studies, in accordance with the following regulations:

In his Junior or Senior years the student shall be free in his choice of optional studies, but may not take more than four terms' work in one department or under one instructor. The following are the departments in which optional studies are offered:

1. Botany and Entomology.
2. Zoölogy and Anatomy.
3. Historical Geology and Physiology.

4. Physical Geology, Mineralogy, and Petrography.
 5. Chemistry and Metallurgy.
 6. Civil Engineering.
 7. Physics.
 8. Mathematics and Astronomy.
 9. Philosophy.
 10. Sociology and Political Economy.
 11. European History.
 12. American History and Administration.
 13. Greek.
 14. Latin.
 15. German.
 16. French.
 17. English.
 18. Pharmacy.
 19. Pedagogy.
 20. Music.
 21. Spanish.
 22. Organic Evolution.
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List of Courses.

NOTE.—(a) means that the study occupies the first half term, (b) the last half term. Unless otherwise stated, all courses are open to Juniors and Seniors.

1¹—Botany.

I. ELEMENTARY STRUCTURAL BOTANY. Laboratory work 10 hours per week and lectures. Field exercises. 2d term. Every day, 1 to 3. *Freshman and Sophomore alternative.* Professor Stevens and Professor Barber.

II. HISTOLOGICAL BOTANY. Laboratory work 10 hours per week and lectures. 1st term. Every day, 1 to 3 and 3 to 5. *Sophomore alternative.* Professor Stevens.

III. CRYPTOGAMIC BOTANY. Laboratory work 10 hours per week and lectures. 1st term. Every day, 10 to 12. Open to students who have taken course I. Professor Barber.

IV. PHYSIOLOGICAL BOTANY. Laboratory work 10 hours per week and lectures. 2d term. Every day, 3 to 5. Open to students who have taken courses I and III. Professor Stevens.

V. ADVANCED BOTANY. Special laboratory course. Ten weeks, 10 hours a week, by appointment. Open to students who have taken courses I and II or I and III. Professor Barber.

VI. BACTERIOLOGY. 1st term (b). 8 to 10. Professor Barber.

VII. VEGETABLE CYTOLOGY. Throughout the year. By appointment. Professor Stevens.

1²—Entomology.

I. INTRODUCTORY LABORATORY COURSE IN ANATOMY. 1st term. Every day, 1 to 3. Professor Hunter.

II. ECONOMIC ENTOMOLOGY. Open to students who have completed course I. 1st term. Every day, 3 to 5. Professor Hunter.

III. A STUDY OF THE KANSAS FAUNA. Laboratory and field work. Open to students who have completed course I. This course refers to the summer field work of the department. Such work, if meritorious, will be credited as equal to one study pursued in the University for double the length of time spent in the field. Professor Hunter.

IV. GENERAL COURSE. Lectures, laboratory work, field exercises, study and observation of life-histories. This course is adapted to those who expect to teach entomology in high schools. 2d term. Every day, 1 to 3. Professor Hunter.

V. SPECIAL LABORATORY COURSE. Thesis work in anatomy, taxonomy, morphology, or life-histories. Ten hours a week, by appointment, for entire year. Course V must be preceded by courses I, and II or III. Professor Hunter.

2.—Zoölogy and Anatomy.

ELEMENTARY ZOÖLOGY. Lectures and laboratory work. 1st term. Every day, from 1 to 3. *Sophomore alternative*. Packard's Zoölogy, advanced course, and Marshall and Hurst's Practical Zoölogy. Professor Dyche.

II. MORPHOLOGICAL ZOÖLOGY. The comparative study of types. Lectures and laboratory work. 2d term. Every day, from 1 to 3. Brook's Invertebrate Zoölogy; Packard's Zoölogy; Marshall and Hurst's Practical Zoölogy. Professor Dyche.

III. SYSTEMATIC AND DESCRIPTIVE ZOÖLOGY. Lectures and laboratory work. 2d term. Every day, from 3 to 5. A manual of North American birds, by Rob't Ridgway; Key to North American Birds, by Elliott Coues; Jordan's Manual of Vertebrates; The Fishes of North and Middle America, by Jordan and Everman. Professor Dyche.

IV. HISTOLOGY, OR MICROSCOPIC ANATOMY. Lectures and laboratory work. 2d term. Every day, from 3 to 5. Open to students who have taken course I, or comparative anatomy, course III. Pier-sol's Normal Histology. Mr. McClung.

V. CYTOLOGY, OR CELLULAR BIOLOGY. Lectures and laboratory work. 2d term. By appointment. Open to students who have taken course IV. Mr. McClung.

3.—Historical Geology, Vertebrate Anatomy, and Physiology.

I. HISTORICAL GEOLOGY. Lectures. Scott's Geology. 2d term (*a*). Every day, at 4. Must be preceded by zoölogy I, or its equivalent. Professor Williston.

II. PALEONTOLOGY. Lectures and laboratory work. Nicholson and Lydekker, Zittel's Handbook. 2d term (*b*). Every day, at 4. Must be preceded by course I, or its equivalent. Professor Williston.

III. COMPARATIVE ANATOMY OF VERTEBRATES. Laboratory work. 1st term. Every day, at 3. Professor Williston.

IV. PHYSIOLOGY. Lectures and recitations. 1st term. Every day, at 11. Martin's Human Body. Professor Mathews.

V. SPECIAL WORK IN VERTEBRATE ANATOMY—recent or fossil. Must be preceded by course I. At option of instructor. Professor Williston.

VI. FIELD WORK IN PALEONTOLOGY. For advanced students only. Such work, if sufficiently meritorious, will be credited as equal to one study pursued in the University for double the length of time spent in the field. Professor Williston.

4.—Physical Geology, Mineralogy, and Petrography.

I. ELEMENTS OF MINERALOGY AND PETROGRAPHY. Lectures and laboratory work. An elementary course in mineralogy, including crystallography, blowpipe analysis, and the study of building stone. A junior-senior optional; required of sophomore mining engineers and junior civil engineers. 1st term, Tuesday and Thursday; 2d term, Monday, Wednesday, and Friday, 9 to 11. Professor Haworth.

II. PHYSIOGRAPHY. An elementary course in general physiography, including rock disintegration, river erosion, and the character and origin of land drainage and surface configuration. A junior-senior optional. 1st term, Monday, Wednesday, and Friday; and 2d term, Tuesday and Thursday; alternating with Elements of Mineralogy and Petrography I; at 9.

III. ADVANCED MINERALOGY. Daily lectures and laboratory work. To follow I. 2d term (*a*). Every day, by appointment. Professor Haworth.

IV. ELEMENTARY PETROGRAPHY. Daily lectures and laboratory work. To follow I, and may follow II, or be taken as a parallel study. 2d term (*a*). Every day, by appointment. Professor Haworth.

V. ELEMENTS OF PHYSICAL GEOLOGY. Daily lectures. An elementary course preliminary to elements of historical geology. 2d term (*a*). Every day, at 3. Professor Haworth.

VI. ECONOMIC GEOLOGY. Daily lectures. Must be preceded by I or IV, or an equivalent. 1st term. Every day, at 3. Professor Haworth.

VII. ELEMENTARY MINERALOGY. Briefer course. Daily lectures and laboratory work. A study of elementary crystallography, and of the more important ores. Required of pharmacy Seniors. 2d term (a), at 4. Professor Haworth.

Field work in geology and mineralogy, as described under graduate courses, may be begun by undergraduate students who are sufficiently advanced. It is desirable that students working in this group elect a portion of the work offered by the department of historical geology and anatomy, or the ten-weeks' course in assaying given by the department of chemistry.

5.—Chemistry.

Pharmacy and Preparatory Medical Studies.

I. CHEMISTRY. A study of chemical elements and their compounds. Remsen's Briefer Course in Chemistry. Experimental lectures and recitations. Laboratory work three afternoons each week, from 1 to 3. Required of Junior pharmacy and preparatory medical students. 1st term, 3 to 5. Professor Franklin and Mr. Cady.

II. QUALITATIVE ANALYSIS. Lectures once a week; laboratory work daily. Bailey's Laboratory Guide to the Study of Qualitative Analysis. 2d term (a), from 1 to 4. Professor Bartow.

III. PHARMACEUTICAL QUANTITATIVE ANALYSIS. Evans's Quantitative Analysis. Laboratory work daily; lectures once a week. 1st term (a). Professor Bartow.

Freshman and Sophomore Studies.

IV. CHEMISTRY. A study of chemical elements and their compounds. Remsen's Briefer Course in Chemistry. Experimental lectures and recitations. Laboratory work one afternoon each week, from 1 to 3. Required either in Freshman or Sophomore year of all students who do not offer chemistry for admission. 2d term, at 8 or 10. Professor Bailey, Professor Bartow, and Mr. Cady.

V. QUALITATIVE ANALYSIS. Lectures and laboratory work daily. Bailey's Laboratory Guide to the Study of Qualitative Analysis. 1st term, from 9 to 11, or from 1 to 3. Freshman and Sophomore alternative. Mr. Cady. This course must be preceded by chemistry I or IV.

Junior and Senior Optionals.

VI. QUANTITATIVE ANALYSIS. Fresenius's or Talbot's Quantitative Analysis. Laboratory work 10 hours a week for two consecutive hours daily, either forenoon or afternoon. 1st or 2d term. Professor Bailey and Professor Bartow. This course must be preceded by chemistry IV and V.

VII. QUANTITATIVE ANALYSIS. Same as course VI. 1st or 2d term. The latter half of this term may be devoted to some special

topic, as water analysis, iron analysis, sugar analysis, or assaying. Professor Bailey and Professor Bartow. This course must be preceded by chemistry IV, V, and VI.

VIII. INORGANIC CHEMISTRY. Required of Senior electrical engineers. 1st term, daily, at 8. This course must be preceded by chemistry IV and V. Professor Franklin.

IX. ORGANIC CHEMISTRY. Remsen's Organic Chemistry and Orndorff's Manual. Lectures Monday, Wednesday, and Friday, Laboratory work Tuesday and Thursday, at 1. 2d term. Professor Franklin. This course must be preceded by chemistry IV and V.

X. TOXICOLOGY. Lectures and recitations. Every day, at 11. Required of students in the preparatory medical course and of Senior pharmacists. 1st term (*b*). Professor Bailey. This course must be preceded by chemistry I or IV.

XI. ASSAYING. Furman's Assaying. Laboratory work 10 hours per week. Daily, from 3 to 5. 2d term (*b*). Mr. Cady. This course must be preceded by chemistry IV, V, and VI, the first half of VII, and mineralogy I.

XII. ORGANIC PREPARATIONS. Laboratory work in Organic Chemistry. 1st or 2d term. Ten hours per week, at the convenience of the instructor. Professor Bartow. This course must be preceded by chemistry IV, V, and IX.

XIII. SANITARY AND APPLIED CHEMISTRY. The study of air, potable waters, fuels, ventilation, lighting, disinfectants, foods and their adulteration, methods for cooking and preparing food products, chemical processes of digestion, etc. Lectures and laboratory demonstrations. 1st term. Every day, at 11. Professor Bailey. This course must be preceded by chemistry IV.

XIV. THE CHEMISTRY OF SUGAR MANUFACTURE. Laboratory work. Every day, at the convenience of the instructor. 2d term (*b*). Professor Bailey. This course must be preceded by chemistry IV, V, VI, and the first half of VII.

XV. WATER ANALYSIS. Laboratory work 10 hours a week, by appointment. 1st or 2d term. Professor Bartow. This course must be preceded by chemistry IV, V, and VI.

XVI. PHYSICAL CHEMISTRY. A laboratory course. At the convenience of the instructor. 1st and 2d term. Professor Franklin.

XVII. PHYSICAL CHEMISTRY: Lectures and recitations. Morgan's Elements of Physical Chemistry. 2d term, daily, at 8. Professor Franklin.

6.—Civil Engineering.

I. ANALYTICAL MECHANICS. 1st term. Every day, at 11. Professor Marvin.

II. RESISTANCE OF MATERIALS. 2d term. Every day, at 10. Professor Marvin.

III. MECHANICS OF FLUIDS. 1st term (*a*). Every day, at 10. Professor Marvin.

IV. ROOFS AND BRIDGES. 1st term. Every day, from 1 to 3. Professor Marvin.

V. ENGINEERING DESIGN. 2d term. Every day, from 1 to 3. Professor Marvin.

VI. SURVEYING. *Sophomore alternative*. 2d term. Every day, at 10. Mr. Searcy.

VII. FIELD ENGINEERING. 1st term. Every day, at 8. Mr. Searcy.

VIII. LOCATION OF RAILWAYS. First three-fifths of the 2d term. Every day, at 9. Mr. Searcy.

IX. ROADS AND PAVEMENTS. Last two-fifths of the 2d term. Every day, at 9. Mr. Searcy.

X. SANITARY ENGINEERING. 1st term (*a*). Every day, at 11. Mr. Searcy.

XI. WATER-SUPPLY. 2d term (*a*). Every day, at 11. Mr. Searcy.

XII. MASONRY. 1st term (*b*). Every day, at 9. Mr. Searcy.

XIII. IRRIGATION. 2d term. Every day, at 3. Mr. Searcy.

XIV. GEODESY. 1st term. Every day. Professor Marvin.

7.—Physics.

I. STATICS, KINETICS, ELECTRICITY, AND MAGNETISM. Lectures and experimental demonstrations. 1st term. Four days, at 11, with one day collateral reading or one afternoon laboratory work. Prerequisite: Plane trigonometry. Professor Blake and Professor Dunstan.

II. SOUND, HEAT, AND LIGHT. Lectures and experimental demonstrations. 2d term. Four days, at 11, with one day collateral reading or one afternoon laboratory work. Prerequisite: Plane trigonometry. Professor Blake and Professor Dunstan.

III. THEORY OF LIGHT. An advanced experimental study of the phenomena of velocity, refraction, double refraction, polarization, interference and dispersion, together with the mathematical treatment necessary for the understanding of modern methods and apparatus employed. Reference books: Preston's Theory of Light, Verdet's Lecons sur l'Optique, Scheiner's Astronomical Spectroscopy. Prerequisites: Calculus, physics I and II, or equivalent. Either term, daily, at convenience of instructor. Mr. Rice.

IV. ELECTRIC OSCILLATIONS. Deduction and use of Maxwell's and Hertz's Equations of the Electromagnetic Field. Electromagnetic theory of light, and a critical study of the work of Hertz and his successors. Text and reference books: Poincaré, Hertz, Von Helmholtz, Boltzman, and Thomson. Prerequisites: Calculus, dif-

ferential equations, and physics I and II. Either term. Every day, at convenience of instructor. Professor Dunstan.

V. THERMODYNAMICS OF GASES. Saturated and superheated vapors. Theory of the steam and other heat engines. Engine and boiler testing, including Hirn's Analysis. Text-book: Peabody's Thermodynamics of the Steam-engine. Prerequisites: Calculus, physics I and II. First term. Every day, at 11. Professor Dunstan.

VI. DYNAMO-ELECTRIC MACHINERY. Theory and design of direct-current generators and motors. Prerequisites: Plane trigonometry and physics I. Second term. Every day, at 9. Mr. Rice.

VII. THEORY OF ELECTRICITY AND MAGNETISM. Mathematical development of the fundamental principles of electrostatics, magnetism, and of direct currents of constant E. M. F., with special reference to their variable stage. Prerequisites: Calculus and physics I. First term. Every day, at 1. Professor Blake.

VIII. THEORY OF ALTERNATING CURRENTS. Development of the general equations in circuits containing resistance, self-induction, and capacity. This course is intended to develop the mathematical treatment of single-phase-current phenomena. Text-book: Steinmetz's Alternating-current Phenomena. Prerequisites: Calculus and physics I and VIII. Second term. Every day, at 1. Professor Blake.

8.—Mathematics and Astronomy.

Mathematics.

I. ALGEBRA. Wentworth's College Algebra. First term (a). Every day, at 8, 9, 10, and 11. *Required of all Freshmen.* Professor Miller, Professor Newson, and Mr. Rice. PLANE TRIGONOMETRY. Miller. 1st term (b). Every day, at 8, 9, 10, and 11. *Required of all Freshmen.* Professor Miller, Professor Newson, and Mr. Rice.

II. SPHERICAL TRIGONOMETRY (a) AND THEORY OF EQUATIONS (b). 2d term. Every day, at 8, 9, and 10. *Freshman alternative.* Professor Miller, Professor Newson, and Mr. Rice.

III. ANALYTIC GEOMETRY. *Sophomore alternative.* 1st term. Every day, at 8. Must be preceded by I and II. Professor Newson.

IV. CALCULUS. Osborne. *Sophomore alternative.* 2d term. Every day, at 8. Must be preceded by III. Professor Miller.

V. MODERN GEOMETRY. Scott. 2d term. Every day at 11. Must be preceded by III. Professor Newson.

VI. THEORY OF EQUATIONS. Burnside and Panton. 1st term. Every day, by appointment. Must be preceded by III and IV. Professor Miller.

VII. ADVANCED CALCULUS. Williamson. 2d term. Every day, at 11. Must be preceded by IV. Professor Newson.

VIII. DIFFERENTIAL EQUATIONS. 1st term. Every day, at 10. Must be preceded by IV. Mr. Rice.

Courses V and VI are given in alternate years with courses VII and VIII; VII and VIII will be given in 1899-1900.

Astronomy.

IX. DESCRIPTIVE ASTRONOMY. Lectures and recitations, with occasional evenings for observation. Young's Astronomy. 1st term. Every day, at 11. Professor Miller.

X. PRACTICAL ASTRONOMY, including the Theory of Least Squares. Use of a sextant and transit instrument, determinations of time, latitude and longitude, etc. Doolittle's Practical Astronomy or Barlow and Bryan's Mathematical Astronomy. 2d term. Every day, at 11. Must be preceded by IX, and by III and IV. Professor Miller.

9.—Philosophy.

I. ELEMENTARY LOGIC AND PSYCHOLOGY. *Sophomore alternative*. 1st and 2d term. Every day, at 8. Mr. Hogg.

II. EXPERIMENTAL PSYCHOLOGY. 1st and 2d term. Every day, at 3. Professor Templin and Mr. Hogg.

III. ETHICS. 1st term. Every day, at 2. Professor Templin.

IV. ÆSTHETICS. 1st term. Every day, at 4. Professor Templin.

V. HISTORY OF PHILOSOPHY. 2d term. Every day, at 11. Professor Templin.

VI. ADVANCED LOGIC. 2d term. Every day, at 9. Mr. Hogg.

VII. COSMOLOGY. 2d term (a). Every day, at 9. Professor Templin.

VIII. METAPHYSICS. 2d term (b). Every day, at 9. Professor Templin.

10.—Sociology and Political Economy.

Economics.

I. ELEMENTS OF POLITICAL ECONOMY. 1st term. Every day, at 3. Professor Blackmar.

II. MONEY AND BANKING. 2d term (a). Every day, at 3. Professor Blackmar.

III. TAXATION AND FINANCE. 2d term (b). Every day, at 3. Professor Blackmar.

IV. HISTORY AND THEORY OF POLITICAL ECONOMY. 1st term. Every day, at 2. Professor Blackmar.

V. UNSETTLED QUESTIONS IN ECONOMICS. 2d term. Every day, at 2. Professor Blackmar.

Sociology.

VI. PRINCIPLES OF SOCIOLOGY. 1st term. Every day, at 1. Professor Blackmar.

VII. SOCIAL PATHOLOGY. 2d term. Every day, at 1. Professor Blackmar.

VIII. ECONOMIC SEMINARY, for advanced students in political economy and sociology. Meets at 5 o'clock on Tuesdays, in room 15.

Advanced Courses.

IX. POLITICAL AND SOCIAL INSTITUTIONS. Open to graduates, and to students who have taken undergraduate courses I and IV in sociology, and courses III and VII in European history. Professors Blackmar and Adams.

11.—European History.

I. ENGLISH HISTORY. *Sophomore alternative.* 1st term. Every day, at 10, 1, and 2 (three sections). Professor Adams and Mr. Price.

II. FRENCH AND GERMAN HISTORY. 1st term. Every day, at 9. Professor Adams.

III. POLITICAL HISTORY OF MODERN EUROPE. 1st term. Every day, at 11. Professor Adams.

IV. EUROPEAN CONSTITUTIONS. 2d term. Every day, at 11. Professor Adams.

V. RENAISSANCE AND REFORMATION. 2d term. Every day, at 9. Professor Adams.

VI. EIGHTEENTH CENTURY EUROPEAN HISTORY. 2d term. Every day, at 10. Professor Adams.

VII. ENGLISH CONSTITUTIONAL HISTORY. 2d term. For advanced students. Hours by appointment.

12.—American History and Administration.

I. COLONIAL HISTORY, 1492–1763. 1st term (*a*). Every day, at 2. Professor Hodder.

II. THE REVOLUTION AND CONFEDERATION. 1st term (*b*). Every day, at 2. Professor Hodder.

III. CONSTITUTIONAL LAW. 2d term (*a*). Every day, at 2. Not necessarily preceded by either course I or II. Professor Hodder.

IV. INTERNATIONAL LAW. 2d term (*b*). Every day, at 2. Professor Hodder.

V. PRESIDENTIAL ADMINISTRATIONS—Washington to Jackson. 1st term. Every day, at 3. Open to Seniors, and to other students who have passed course III creditably. Professor Hodder.

VI. PRESIDENTIAL ADMINISTRATIONS—Jackson to Lincoln. 2d term. Every day, at 3. Continuation of course V. Professor Hodder.

13.—Greek.

1. ELEMENTARY GREEK. Gleason and Atherton's or White's First Greek Book. 1st term. Every day, at 9. *Open to all students who enter without Greek.* Mr. Sterling.

II. CONTINUATION OF COURSE I. Xenophon's *Anabasis*. 2d term. Every day, at 11. Mr. Sterling.

III. HOMER. Seymour's School *Iliad*, six books. Jebb's Introduction to the *Iliad* and *Odyssey*. Sight-reading in the New Testament. 1st term. Every day, at 9. For Freshmen who have entered with elementary Greek and the *Anabasis*, or Sophomores, Juniors or Seniors who are prepared for it. Professor Wilcox.

IV. MORGAN'S EIGHT ORATIONS OF LYSIAS. Exercises in prose composition. Sight-reading in the New Testament. 2d term. Every day, at 9. To follow course III. Mr. Sterling.

V. PLATO'S APOLOGY AND CRITO; THE PHILIPPICS OF DEMOSTHENES. Exercises in prose composition. Sight-reading. 1st term. Every day, at 8. Open to all who have taken courses III and IV, or their equivalents. Mr. Sterling.

VI. THE ANTIGONE OF SOPHOCLES; IPHIGENIA AMONG THE TAU-RIANS OF EURIPIDES; AND PROMETHEUS OF ÆSCHYLUS. Lectures on the Greek theater. Sight-reading. 2d term. Every day, at 9. Open to all students who have taken courses III and IV, or their equivalents. Professor Wilcox.

VII. ARISTOPHANES: *Clouds*, *Acharnians*, *Frogs*, and *Birds*. Lectures and private reading on comedy and Attic history. 1st term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1898-'99. Professor Wilcox.

VIII. HOMER'S *ILIAD*. Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 2d term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1898-'99. Professor Wilcox.

IX. HOMER'S *ODYSSEY*. Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 1st term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1899-1900. Professor Wilcox.

X. PLATO: *Gorgias*, *Phædo*, and Purvis's Selections. Critical interpretation of the first, rapid reading of the rest. Lectures and private reading on Plato and Greek philosophy. 2d term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1899-1900. Professor Wilcox.

XI. THE GREEK IN ENGLISH. The elements of Greek, with especial reference to English. This course covers the elements of inflection and syntax, and serves as an introduction to the following course. 1st term. Every day, at 10. Open to Juniors and Seniors who have had no Greek. Mr. Sterling.

XII. ATTIC GREEK. Stories and legends and selections from prose authors. Translation; so much grammar only as is required

by the text read. 2d term. Every day, at 10. Open to Juniors and Seniors who have taken course XI. Mr. Sterling.

XIII. HISTORY OF GREEK LITERATURE, through translations. Lectures, recitations, private reading, writing of themes. 2d term. Every day, at 11. Open to all Juniors and Seniors. Professor Wilcox.

XIV. HISTORY OF GREEK ART. Recitations, lectures, private reading, writing of themes. 1st term. Every day, at 11. Open to all Juniors and Seniors. Professor Wilcox.

Greek Symposium.—All Greek students in the University meet once a fortnight in a united class to listen to lectures on subjects of more general interest than special class work, or of such a character as to need a larger amount, or different kind, of illustrative material than is available in the class room. The subjects the last four years have been Greek architecture and its continuation and revival in later and modern times, Greek sculpture, famous Greek sites and scenes, and the latest excavations on Greek soil; all illustrated by stereopticon slides.

14.—Latin.

I. CICERO (*De Amicitia*) AND LIVY (one book). With prose composition based on the text read, grammar, and sight-reading. 1st term. Open to Freshmen. Every day, at 9 and 11. Miss Oliver.

II. HORACE. With prose composition, grammar, and sight-reading. 2d term. Open to Freshmen. Every day, at 9 and 11. Miss Oliver.

III. CICERO'S LETTERS, AND CATULLUS. With prose composition, grammar, and sight-reading. 1st term. Open to Sophomores. Every day, at 11. Professor Walker and Miss Oliver.

IV. PLAUTUS AND TERENCE, AND TACITUS (*Agricola* and *Germania*). With prose composition and sight-reading. 2d term. Open to Sophomores. Every day, at 11. Professor Walker and Miss Oliver.

V. CICERO'S TUSCULAN DISPUTATIONS, AND LUCRETIVS. With prose composition and sight-reading. 1st term. Open to students who have completed courses I-IV. Every day, at 1. Professor Walker and Miss Oliver.

VI. PLINY'S LETTERS, AND TACITUS' HISTORIES; HISTORY OF LATIN LITERATURE. With prose composition and sight-reading. 2d term. Open to students who have completed courses I-V. Every day, at 1. Professor Walker and Miss Oliver.

VII. TEACHERS' COURSE. Study of the political and literary history of the times of Cæsar, Cicero, and Vergil; rapid reading of portions of those authors; practice in reading Latin prose and poetry; lectures on Latin syntax; general discussion of text-books and methods, etc. 1st term. Open only to Seniors who have completed

at least courses I-IV, preferably to those who have completed courses I-VI. Every day, at 2. Professor Walker.

NOTE.—Most of this work has been done by the present Junior class. This course will therefore be changed for the year 1899-1900, unless there is a sufficient number of special applications for it. If it is given, the Seniors will next year unite with the Juniors.

VIII. VERGIL'S ECLOGUES, GEORGICS, AND PARTS OF THE ÆNEID. This course is introductory to the seminary work of graduate students. 2d term. Open to students who have completed courses I-VII. Every day, at 2. Professor Walker.

15.—German.

I.* OUTLINE OF GRAMMAR (Otis), WITH COMPOSITION EXERCISES. Brandt's Reader. 1st term. Every day, at 9, 10, and 11. Professor Carruth, Mr. Engel, and Miss Parrott.

II. (a) BRANDT'S READER (completed), WILHELM TELL. Also sight-reading. 2d term. Every day, at 9 and 11. Mr. Engel and Miss Parrott. (b) SCIENTIFIC PROSE. Gore's Scientific Reader, monographs. For engineering students only. 2d term. Every day, at 8. Mr. Engel.

III. KARL DER GROSSE, DIE JOURNALISTEN, BURG NEIDECK. Sight-reading. 1st term. Every day, at 8 and 9. Mr. Engel and Miss Parrott.

IV. WALLENSTEIN (complete). 2d term. Every day, at 9 and 11. Mr. Engel and Miss Parrott.

V. (a) COMPOSITION, TRANSLATION OF CONNECTED ENGLISH (Howell's Farces or Harris's Composition), half course. Mr. Engel. (b) FAUST (part I), half course. 1st term. Every day, at 11. Professor Carruth.

VI. NATHAN DER WEISE, EKKEHARD. 2d term. Every day, at 11. Professor Carruth.

VII. GERMAN LITERATURE OF THE EIGHTEENTH CENTURY. Lectures, with reading of masterpieces out of class, with comment on more difficult works in class. Essays and criticism, by members of the class. Klopstock, Wieland, Lessing, Herder. 1st term. Every day, at 10. Open only to students who have had German III, IV. Not given in '99-1900. Professor Carruth.

VIII. GERMAN LITERATURE OF THE EIGHTEENTH CENTURY (continued). Goethe, Schiller, and the close of the century. 2d term. Every day, at 10. Not given in '99-1900. Professor Carruth.

IX. GERMAN HISTORICAL NOVELS: Hauff, Scheffel, etc. Careful reading in class of one work by each author, others rapidly outside. Lectures on the history of the novel and on methods and schools in fiction. Theses on separate authors and on the whole

*The full three years of Latin for entrance are required as preparation to German I.

course, by members of the class. 1st term. Every day, at 10. Professor Carruth.

X. GERMAN HISTORICAL NOVELS (continued): Freytag, Dahn, etc. 2d term. Every day, at 10. Professor Carruth.

XI. TEACHERS' COURSE. Advanced grammar, with theory and practice of language teaching. Full course. Intended especially for those who desire to fit themselves for teaching German in high schools. 1st and 2d terms. Every day. Hour not set. Professor Carruth and Mr. Engel.

XII. GOTHIC. Phonetics and introduction to Germanic philology. 1st term. Every day, at 2. Professor Carruth.

XIII. MIDDLE HIGH GERMAN. Grammar. Nibelungenlied. Hartmann, Der arme Heinrich. Selections from Walther von der Vogelweide. Lectures. 1st term. Every day, at 9. Professor Carruth and Mr. Engel.

XIV. LUTHER AND THE SIXTEENTH CENTURY. Reading and grammatical study of the German literature of the Reformation, preceded by an outline of historical German grammar. 2d term. Every day, at 3. Professor Carruth and Mr. Engel.

16.—French.

I.* GRAMMAR (Van Daell and Grandgent) AND READER (Super). Drill in forms and elementary syntax. Elementary composition and dictation. 1st term. Every day, at 9 and 11. Professor Canfield and Professor Galloo.

II. GRAMMAR AND SIMPLE PROSE TEXTS (Mlle. de la Seigliere; Roman d'un jeune homme pauvre). Follows I. 2d term. Every day, at 9, 10, and 11. Professor Canfield, Professor Galloo, and Miss Parrott.

III. MODERN FRENCH PROSE of Mérimée, Gautier, Hugo, Daudet, Pailleron, and others. Rapid reading for acquirement of vocabulary, and advanced syntax. Dictation and practice in writing. 1st term. Every day, at 9. Professor Canfield.

IV. THE CLASSIC DRAMA. Plays of Corneille and Racine. Dictation and practice in writing. 2d term. Every day, at 9. Professor Canfield.

V. (a) MOLIERE (one-half term). (b) FRENCH COMPOSITION AND CONVERSATION (one-half term). 1st term. Every day, at 11. Professor Galloo.

VI. THE SEVENTEENTH CENTURY. Fables, letters, memoirs, novels, sermons, satires. 2d term. Every day, at 11. Professor Canfield.

VII. THE ROMANTIC SCHOOL (1800-1835): A. de Vigny, Chateau-

*The full three years of Latin for entrance are required as preparation to French I.

briand, Lamartine, Hugo, A. de Musset. 1st term. Every day, at 10. Professor Canfield.

VIII. THE DEVELOPMENT OF THE NOVEL: Hugo, George Sand, Balzac. 2d term. Every day, at 10. Professor Canfield.

IX. ADVANCED COMPOSITION. Daily exercises in writing and speaking French. 2d term. Given in 1898-'99. Alternates with course X. Every day, at 11. Must be preceded by course V (b), or its equivalent. Professor Galloo.

X. HISTORY OF FRENCH LITERATURE. Lectures, recitations, and private readings. 2d term. Given in 1899-1900. Alternates with course IX. Every day, at 11. Professor Galloo.

17.—English.

A.—English Literature.

I. HISTORY OF ENGLISH LITERATURE AND LANGUAGE. Pancoast's Introduction to English Literature, supplemented by library work; Lounsbury's History of the English Language. 2d term. Every day at 8 and 11. *Required of all Freshmen except those admitted with two or three years of English.* Mr. O'Leary.

II. EIGHTEENTH CENTURY LITERATURE. Gosse's History of Eighteenth Century Literature; Hales' Longer English Poems. 2d term. Every day, at 9 and 11. *Sophomore alternative.* Mr. Jones.

III. BACON AND MILTON. Bacon's Essays, or Advancement of Learning; Milton's Minor Poems and Paradise Lost. 1st term. Every day, at 11. Mr. Jones.

IV. SHAKSPERE. Three plays. 1st term. Every day, at 10. Professor Dunlap.

V. SHAKSPERE. Three plays. 2d term. Every day, at 10. Professor Dunlap.

VI. AMERICAN LITERATURE. Philosophy, criticism and methods of study. Lectures, recitations, reports upon authors read, and discussions. 1st term. Every day, at 9. Professor Hopkins.

VII. CHAUCER AND SPENSER. 2d term. Every day, at 11. Professor Dunlap.

VIII. ENGLISH LITERATURE OF THE NINETEENTH CENTURY. 1st term. Every day, at 11. Professor Dunlap.

IX. INVENTION AND CRITICAL ANALYSIS. Study of special forms of literature, development, methods and theories, with practice in invention. For advanced students only; should be preceded by English B VI, and by at least two terms of English literature besides I and II. 1st term. Every day, at 11. Professor Hopkins.

All courses except I and II are optionals, and are open only to those who have completed courses I and II, or their equivalent.

B.—Rhetoric and English Language.

I. RHETORIC. Genung's Outlines of Rhetoric; English composition, with themes and exercises. 1st term. Every day, at 9, 10, and 11. *Required of all Freshmen except those admitted with three years of English.* Mr. Jones and Mr. O'Leary.

II. ANGLO-SAXON. Bright's Anglo-Saxon Reader. 1st term. Every day, at 9. Professor Dunlap.

III. ANGLO-SAXON. Bright's Anglo-Saxon Reader and *Béowulf*. 2d term. Every day, at 9. Professor Dunlap.

IV. MIDDLE ENGLISH. Morris's Specimens of Early English, part I. 1st term. Every day, at 10. Professor Hopkins. Alternating with V in successive years.

V. MIDDLE ENGLISH. Morris and Skeat's Specimens of Early English, part II; Skeat's *Piers Plowman*. 2d term. Every day, at 11. Not given in 1899-1900. Professor Hopkins.

VI. ADVANCED ENGLISH COMPOSITION. Lectures, exercises, theses; practical and individual criticism as to structure and style of each student's written work. 2d term. Monday, Wednesday, and Friday: Lecture at 8; seminar at 9. Counts as a full study. Professor Hopkins and Mr. O'Leary.

VII. ADVANCED ENGLISH COMPOSITION. Special required course in the School of Engineering. Exposition, argument and technical description. 1st term. Tuesday and Thursday: Lecture at 8; seminar at 9. Mr. O'Leary.

VIII. TEACHERS' COURSE IN LANGUAGE AND RHETORIC. Lectures on English philology, practical training in the criticism of manuscript, study of methods of teaching composition. To be preceded by English B VI. 2d term. Every day, at 10. Professor Hopkins.

All courses except I and VII are Junior and Senior optionals in the School of Arts, and should be preceded by course I, and by courses I and II in English literature. Courses II, III, IV and V should be preceded by courses I and II in German, or their equivalent; and courses IV and V should be preceded by courses II and III. Course VI is required in School of Fine Arts. Course VII is open only to students in the School of Engineering, and must be preceded by course I.

Sophomore Requirements.—Of each member of the Sophomore class are required in each term three themes* of not less than 1000 words each. These themes will be due on the following dates: First term, October 6, November 10, December 8, 1899; second term, February 9, March 16, April 20, 1900.

*For lists of subjects and full instructions with reference to the preparation and presentation of themes, theses, and forensics, see the bulletin issued by the department.

Junior and Senior Requirements.—Of each member of the Junior and Senior classes are required in each term two theses* or forensics of not less than 2000 words each. These papers will be due on the following dates: First term, October 13, December 1, 1899; second term, February 23, April 27, 1900.

Lectures on Forensics.—During the first half of the first term, a course for Juniors of six lectures on forensic structure and style, accompanied with illustrative exercises, will be given. Attendance will excuse from the first forensic of the term.

C.—Elocution and Oratory.

I. THE ELEMENTS OF VOCAL EXPRESSION. Required of all Freshmen not electing vocal music. 1st term. Every Monday, at 2. Professor Vickrey.

II. ACTION IN ORATORY. Criticism of orations and declamations. Required of all Freshmen not electing vocal music. 2d term. Every Monday, at 2. Professor Vickrey.

III. ORATORY. Practical training in the preparation and delivery of orations. Open to Sophomores, Juniors, and Seniors. 1st term. Every Friday, at 2, or at hours for private rehearsal to be arranged with the instructor. Professor Vickrey.

18.—Pharmacy.

I. PHYSIOLOGICAL CHEMISTRY AND URINALYSIS. Laboratory work and lectures. 2d term (*a*). Every day, 8 to 10. Professor Sayre.

II. PHARMACY AND PHARMACOGNOSY. Pharmacy: 1st term (*a*). Every day, at 9. Pharmacognosy: 1st term (*b*). Every day, at 9. Professor Wagner.

III. MATERIA MEDICA AND THERAPEUTICS. 2d term. Monday, Wednesday, and Friday, at 10. Professor Sayre.

The above optionals are offered especially to those students in the School of Arts who are preparing themselves for the study of medicine.

19.—Education.

I. HISTORY OF EDUCATION. 2d term. Every day, at 4. Professor Olin.

II. SCHOOL LAW. 1st term (*a*). Every day, at 3. Professor Olin.

III. PHILOSOPHY OF EDUCATION. 1st term (*b*). Every day, at 3. Professor Olin.

IV. SCHOOL MANAGEMENT. 2d term (*a*). Every day, at 3. Professor Olin.

V. METHODS OF INSTRUCTION. 2d term (*b*). Every day, at 3. Professor Olin.

VI. SCHOOL SUPERVISION. Open to students who have taken courses IV and V. 1st term (*a*). Every day at 4. Professor Olin.

VII. A COMPARATIVE STUDY OF EDUCATIONAL SYSTEMS. Open to students who have taken course I. 1st term (*b*). Every day, at 4. Professor Olin.

VIII. EDUCATIONAL THEORY. A critical study of the educational doctrines found in the writings of Plato, Comenius, Locke, Rousseau, Pestalozzi, and Spencer. Open to students who have taken courses I and III. 1st term. Every day, at 10. Professor Olin.

IX. SEMINARY. Original investigation of special subjects. Open to students who have taken courses I and III. 2d term. Hours by appointment. Professor Olin.

20.—Music.

I. CONTRAPUNTAL HARMONY. Monday and Thursday, at 11. Professor Penny.

II. MUSICAL COMPOSITION. Monday and Thursday, at 9. Professor Penny.

III. HISTORY OF THE FINE ARTS. Beginning second term. Wednesday, at 2:30. Professor Penny.

21.—Spanish.

I. GRAMMAR, READING, AND ELEMENTARY COMPOSITION. 1st term. Every day, at 10. Professor Galloo.*

II. RAPID READING, mainly in modern authors (P. A. de Alarcon, Pérez Galdos, Hartzenbusch, Juan Valera, Fernan Caballero, L. F. de Moratin). 2d term. Every day, at 10. Professor Galloo.

22.—Organic Evolution.

THE PRINCIPLES OF EVOLUTION. Lectures and readings. 1st term. Every day, at 4. Chancellor Snow.

* For the present, classes in Spanish are taught by Professor Galloo, associate professor of French and Spanish.

School of Medicine.

Scientific Departments.

Faculty.

F. H. SNOW, *President.*

S. W. WILLISTON, *Dean,*
Anatomy.

E. H. S. BAILEY,
Chemistry and Toxicology.

L. E. SAYRE,
Pharmacy and Materia Medica.

O. TEMPLIN,
Psychology.

E. C. FRANKLIN,
Chemistry.

M. A. BARBER,
Bacteriology.

GEORGE WAGNER,
Pharmacy.

EDWARD BARTOW,
Organic Chemistry.

A. P. MATHEWS.
Physiology.

C. E. McCCLUNG,
Histology and Embryology.

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Medical Jurisprudence.

Curriculum.

JUNIOR YEAR.

First Term :

Human Anatomy. Professor Williston.
General Chemistry. Professor Franklin.
Pharmacy (*a*). Professor Wagner.
Pharmacognosy (*b*). Professor Sayre.

Second Term :

Human Anatomy. Professor Williston.
Organic Chemistry. Professor Bartow.
Materia Medica and Pharmacodynamics (*a*). Professor Sayre.
Physiological Chemistry (*b*). Professor Sayre.

SENIOR YEAR.

First Term :

Human Anatomy (*a*). Professor Williston.
Physiology. Professor Mathews.
Histology. Mr. McClung.
Toxicology (*b*). Professor Bailey.

Second Term :

Physiology. Professor Mathews.
Embryology (*a*). Mr. McClung.
Bacteriology (*b*). Professor Barber.
Psychology. Professor Templin.
Medical Jurisprudence, one lecture weekly. Doctor ——.

All exercises are daily and of two or four hours' duration, unless otherwise noted.

Students who have during the Junior year made a high standing may, with the consent of the instructors and Dean, pursue advanced work in anatomy, physiology, histology, or medical chemistry, for which credit will be given, and all students entering with credit in any of the studies of the course will be required to pursue work in some of the above optionals or in pharmacy or qualitative analysis.

Several years ago the University of Kansas established a one-year preparatory course of instruction in the medical sciences—all that could at that time be profitably taught with the facilities at command. This course has been continued up to the present year, and has, after inspection by the Illinois State Board of Health, been accepted and generally recognized by medical colleges. The great advancement in recent times in medical education and the lengthening of medical courses to four full years of instruction have rendered it desirable to add to the course given in the University all those branches for which the facilities are provided. It is the earnest intention and expectation to add in the early future the remaining courses of medical instruction, completing the full four years' work

for the medical degree. This is desired and will be attempted, not because there are not enough medical colleges already in existence, but because the means of instruction and facilities possessed by a university so large and well equipped as that of Kansas must offer superior advantages for the acquirement of the knowledge now indispensable to the well-educated physician. The University has no intention of furnishing the opportunities here for superficial work. It offers free tuition in the school to all students of Kansas, but it will also insist strenuously that only the worthy and industrious shall receive the benefit of its instruction, and under no conditions will the idle or ill-prepared be tolerated or given the seal of its approval.

With the beginning of the academic year 1899-1900, a complete course in all the scientific branches usually taught in the best medical colleges of the United States will be offered to students, including a two years' course of nine months each.

With the completion of the new chemical building, upon which work will be begun the present season, and the use of the former chemistry building for the other medical work, the facilities and means for instruction in all the departments will be unsurpassed anywhere in the West. There will be ample and separate laboratories, provided with all necessary means and equipment for instruction in human anatomy, physiology, histology, bacteriology, general chemistry, organic chemistry, physiological chemistry, pharmacy, materia medica and pharmacognosy, and psychology. The work of instruction during the whole of the two years will be for the most part in the laboratory.

A certificate will be given to each student at the completion of each year's work, showing the record and amount of his work and his standing.

A special circular will be issued by the close of the college year giving detailed descriptions of the work in the different departments. This circular may be had upon application.

For further information, address the Dean of the School.

Requirements for Admission.

Latin, one year.

English, two years.

German or French, one year.

Civil Government.

Physics, one year.

Algebra and Geometry, two years.

Botany, Zoölogy or Chemistry, one-half year.

For details regarding these studies, see requirements for admission to the School of Arts. Four years of language work will be required, one of which must be in Latin and one in English.

Any student who presents certificates of having satisfactorily pursued the above subjects in any regularly authorized high school

of the state will be admitted without examination. All others will be required to pass satisfactory examinations at the times and places designated for such by the School of Arts. Any student deficient in not more than two full terms' work in any of the above branches will be admitted upon condition; but no such student may receive a certificate for the studies pursued in the University until all conditions, however incurred, are satisfactorily made up.

Any student who has completed the work of the Sophomore year in the School of Arts of this University, or of any other university or college doing equivalent work, will be given the degree of Bachelor of Science in medicine (B. S.) upon the completion of the full course in the School of Medicine.

Graduates of the School of Arts of this University, or of other institutions of like grade, may receive credit on the degree of B. S. for all work of the medical course previously completed; provided, that not less than one full year's work shall be done at the University of Kansas.

School of Law.

Faculty.

F. H. SNOW, *President.*

J. W. GREEN, *Dean,*

Evidence, Contracts, Commercial Paper, Insurance, Constitutional Law, and Corporations.

W. L. BURDICK,

Domestic Relations, Criminal Law, Bailments, Sales, Agency, Railroad Law.

J. W. GLEED,

Real Property.

A. W. BENSON,

Pleadings and Practice.

S. A. RIGGS,

Torts.

D. M. VALENTINE,

Wills and Administration.

C. L. DOBSON,

Corporations.

DAVID MARTIN,

Equity and Equity Jurisprudence.

MARCUS SUMMERFIELD,

Equity Pleadings and Federal Practice.

CHARLES VICKREY,

Elocution and Oratory.

Outline of Work.

The design of this school is to furnish a complete course of legal instruction for persons intending to practice at the bar in any state of the union. The plan of instruction includes the principles of constitutional law, international law, mercantile law, the law of contracts, corporations, insurance, torts, domestic relations, real-property law, equity jurisprudence, evidence, pleading and practice, and criminal jurisprudence.

Experience proves that the principles of law are best taught when those methods are followed which have been found most successful in teaching the sciences. Instruction is therefore given by daily recitations upon assigned portions of text-books, and the study of selected cases, the drill of the recitation room being supplemented by lectures. In addition to their law studies, the students of this school, with the consent of the Faculty, have the privilege of recitations and lectures in the School of Arts, with access to the laboratories, library, etc., subject to the rules governing "Special Students."

The complete course includes three years, each of which occupies eight and one-half months (excluding two weeks' recess at Christmas). For date of opening the school, see "Announcements."

All persons proposing to enter upon the study of law are earnestly recommended first to take a course of liberal studies. A good fundamental education is necessary to a successful study of law.

Requirements for Admission.

1. Physical Geography.
2. History of United States, History of Greece and Rome, English History.
3. Algebra, through quadratic equations.
4. Geometry, Plane and Solid.
5. Physics. Carhart and Chute's Elements of Physics, or equivalent.
6. English: Grammar, Composition, and English Literature (according to two years' English high-school course).

Examinations in these subjects will be held at the University on Thursday, September 7, 1899, beginning at nine o'clock A. M. Graduates of colleges or universities, state normal schools, accredited high schools or academies, and persons presenting first-grade teachers' certificates, are admitted without examination.

Persons who have privately completed a part of the course are admitted to advanced standing in the Junior and Middle classes, on satisfying the Faculty as to their qualifications. No one will be admitted to the Senior class as a regular member, except upon passing a satisfactory examination upon the requirements for admission, and also upon the work prescribed for the Junior and Middle classes.

Applicants for the degree of bachelor of laws must, in every case, have been admitted as regular members of the Senior class at the beginning of the Senior year, and must also have attended the Senior recitations during the entire year.

Students who are not candidates for a degree will be admitted to the school at any time, and without a preliminary examination, and will be permitted to take such work as they may desire, provided they satisfy the instructors under whom the work is taken that they are qualified to pursue it with profit.

Graduates of the University and other approved colleges will be permitted to complete the course in two years and may receive the degree of LL. B., providing they satisfactorily pass examinations in all the prescribed topics.

The Course of Study.

JUNIOR YEAR.

Elementary Law, $7\frac{1}{2}$ hours per week for 5 weeks.
Contracts, $7\frac{1}{2}$ hours per week for 12 weeks.
Agency, $7\frac{1}{2}$ hours per week for 8 weeks.
Bailments, $7\frac{1}{2}$ hours per week for 8 weeks.
Partnerships, $7\frac{1}{2}$ hours per week for 6 weeks.
Sales, $7\frac{1}{2}$ hours per week for 6 weeks.
Domestic Relations, $7\frac{1}{2}$ hours per week for 6 weeks.
Bills and Notes, $7\frac{1}{2}$ hours per week for 8 weeks.
Elocution and Oratory, 2 hours per week for entire year.

MIDDLE YEAR.

Common Law Pleading, $7\frac{1}{2}$ hours per week for 6 weeks.
Code Pleading, $7\frac{1}{2}$ hours per week for 6 weeks.
Torts, $7\frac{1}{2}$ hours per week for 5 weeks.
Evidence, $7\frac{1}{2}$ hours per week for 10 weeks.
Real Property, $7\frac{1}{2}$ hours per week for 6 weeks.
Criminal Law and Procedure, $7\frac{1}{2}$ hours per week for 10 weeks.
Railroad Law, $7\frac{1}{2}$ hours per week for six weeks.

SENIOR YEAR.

Constitutional Law, $7\frac{1}{2}$ hours per week for 10 weeks.
Roman Law, $7\frac{1}{2}$ hours per week for 6 weeks.
Wills and Administration, $7\frac{1}{2}$ hours per week for 8 weeks.
Insurance, $7\frac{1}{2}$ hours per week for six weeks.
Equity, $7\frac{1}{2}$ hours per week for 6 weeks.
Equity Pleading, $7\frac{1}{2}$ hours per week for 4 weeks.
Corporations, $7\frac{1}{2}$ hours per week for 10 weeks.
Conflict of Laws (Private International Law), $7\frac{1}{2}$ hours per week for 4 weeks.

Recitations are so arranged that the students can go over any subject twice, if they so desire.

Moot courts are held for each class every week during the term by a member of the Faculty, at each of which a cause previously assigned is taken up for practice in the conduct of causes and in the discussion of legal principles. A Kent club and other law clubs have been formed by the students, in which dissertations are read and cases argued.

Courses of lectures will be given during the term on various topics of municipal law, on medical jurisprudence, on federal practice, on criminal law, on the law of torts, on political science, and on international law, as supplementary to the general course of instruction.

Examinations.

The members of each class are examined after the completion of each topic. Those desiring admission to the Senior class may make application at the examination in September. The degree of bachelor of laws will be conferred upon such members of the Senior class as shall be recommended by the Faculty to the Board of Regents.

By an act of the legislature, the diploma entitles the graduate to admission to the bar in the state of Kansas.

School of Fine Arts.

Music, Painting, and Oratory.

Faculty.

F. H. SNOW, *President.*

G. B. PENNY, *Dean,*

Professor of Harmony, Musical Composition, Pipe-organ, and Lecturer upon the History of the Fine Arts.

C. A. PREYER,

Professor of Pianoforte, Counterpoint, Canon, and Fugue.

J. A. FARRELL,

Professor of Voice Culture and Singing, Violin, and Italian.

A. H. CLARK,*

Professor of Drawing and Painting.

C. G. DUNLAP,

Professor of English Literature.

E. M. HOPKINS,

Professor of American Literature.

CHARLES VICKREY.

Associate Professor of Elocution.

E. F. ENGEL,

Assistant in German.

H. F. JONES,

Assistant in English.

R. D. O'LEARY,

Assistant in English.

*After 1898-'99 the classes in drawing and painting will be in charge of Mr. W. A. Griffith (Jullien School, Paris).

E. GENEVE LICHTENWALTER,

Assistant in Pianoforte.

CORA McCOLLUM SMITH.

Assistant in Physical Training and Elocution for Women.

MARTHA L. WILSON,

Instructor in Pianoforte.

L. I. BLAKE,

Lecturer on Acoustics and Optics.

A. M. WILCOX,

Lecturer upon the History of Greek Art.

This school of the University has a corps of professors who are personally familiar with the methods employed in the conservatories and art schools of Germany, Italy, France, and England. The school is equipped with excellent pianos, including six concert grands, and one of the finest three-manual organs in the West; charts for sight-reading classes, for illustrating vocal, pianoforte and lecture courses; a good collection of plaster casts, engravings, Braun autotypes, etchings, and lantern slides for illustrated lectures.

The school is organized to meet the demand for better and more extended facilities for liberal education in all branches of the fine arts. Its objects are: To furnish advanced instruction to either amateur or professional students; to combine music, painting, oratory, etc., with regular collegiate work; and to train teachers.

The plan of instruction includes courses in piano, voice culture, artistic singing, pipe-organ, violin, free-hand drawing, painting, modeling, decorative design, harmony, counterpoint, canon, fugue, musical composition, interpretation and conducting, history of the fine arts, the elements of form and instrumentation, oratory, Italian, German, French, physical training, elocution, and English.

Requirements for Admission to all Courses.

- I. Civil Government.
- II. Algebra, one and one-half years.
- III. Geometry, one-half year.
- IV. Physics, one year.
- V. English, two years.
- VI. Foreign Language, two years.

One year of additional English may be substituted for a year of foreign language, and one year of general and ancient history for a year of algebra and geometry. In addition to above branches, two years of free-hand drawing are required as preparation for the course in drawing and painting.

Additional Requirements for all Music Courses.

The rudiments of music and harmony through the progression of common chords, including recognition of all intervals, scales, and chords, by ear; and the contents of Mason and Mathews' Primer of Music. Conditions in this requirement must be made up during the Freshman year.

Piano.—Candidates will be required to play in tempo, and with correct touch, fingering, and phrasing, selections from the following: Loeschorn, Piano Technic (ed. Peters 1416); Bach's Preludes and Two-voiced Inventions: Heller, op. 46. An equivalent amount of technical acquirement, excepting Bach, may be substituted, such as Tausig's Daily Studies, bk. I, or Koehler's Piano Technic; Lebert & Stark, bks. I and II; or Schmitt, op. 16; or Koehler's Etude-School; or Loeschorn, op. 66.

While the adoption of any particular method of technical training is not insisted upon, particular attention is called to the fact that a correct and musical rendering of the compositions accepted for examination is expected. Furthermore, the student must give evidence of musical talent and technical capacity to pursue the full course profitably.

Two courses are offered in piano and voice—the collegiate course, and the artists' course.

Collegiate Course in Pianoforte.

Leading to degree of bachelor of music.

FIRST YEAR.***First Term :***

Piano, twice a week. Professor Preyer.

Technic, once a week.

Harmony—Concords and Discords, twice a week. Professor Penny.

English, *B I.* Mr. Jones and Mr. O'Leary. Hours, 8 or 11.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble Playing.

Second Term :

Piano, twice a week. Professor Preyer.

Technic, once a week.

Harmony—Modulations, Inharmonic Tones, twice a week. Professor Penny.

English, *A I.* Mr. O'Leary. Hours, 8 or 10.

Seminary. Professor Penny.

Recitals and Ensemble.

SECOND YEAR.

Requirements for entrance : Grades in studies of previous year; Bach's Three-voiced Inventions; Cramer; Bulow, Etudes, selected;

Haydn, Variations in F minor; Beethoven, Sonata, op. 14, No. 2, or equivalent.

First Term :

Piano, twice a week. Professor Preyer.

Technic, once a week.

Harmony—Original Work with "Materials," twice a week. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble.

Three themes.

One optional study may be taken from the following list:

Voice Culture, with Italian, three times a week. Professor Farrell.

Free-hand Drawing, three times a week. Professor Clark.

Elocution, three times a week. Professor Vickrey or Mrs. Smith.

German, three times a week. Mr. Engel.

English Literature:

Nineteenth Century, every day, at 11, Professor Dunlap;
or American Literature, every day, at 9, Professor Hopkins;
or Bacon and Milton, every day, at 10, Mr. Jones.

Second Term :

Piano, twice a week. Professor Preyer.

Technic, once a week.

Polyphonic Forms, Fugal Analysis, twice a week. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Advanced English Composition, three times a week. Professor Hopkins and Mr. O'Leary. Hours 8 and 9, Monday, Wednesday, and Friday.

Recitals and Ensemble.

One of the following optional studies may be taken:

Voice Culture, with Italian, three times a week. Professor Farrell.

Drawing, three times a week. Professor Clark.

Elocution, three times a week. Professor Vickrey or Mrs. Smith.

German, three times a week. Mr. Engel.

English Literature (eighteenth century), every day. Mr. Jones.
Hours, 9 or 11.

THIRD YEAR.

Requirements for entrance: Grades in studies of previous years; Bach, Well-tempered Clavichord, vol. 1, Prelude and Fugue in D major; Clementi's Etudes Gradus), selected; Czerny, op. 740, Octave Study in G major; Beethoven, Sonata, op. 26; Mozart, Concerto in D minor, or equivalent.

First Term:

Piano, twice a week. Professor Preyer.
 Composition (musical forms), once a week. Professor Penny.
 Counterpoint. Once a week. Professor Preyer.
 History of the Fine Arts, once a week. Professor Penny.
 Seminary, Wednesdays. Professor Penny.
 Oratorio, once a week (optional). Professor Penny.
 Acoustics and Optics, twenty lectures. Professor Blake.
 Recitals and Ensemble.
 Two forensics.
 One of the following optionals may be taken:
 Voice Culture and Singing, twice a week. Professor Farrell.
 Drawing and Painting, three times a week. Professor Clark.
 Elocution and Physical Training, three times week. Professor Vickrey or Mrs. Smith.
 German, three times a week. Mr. Engel.
 English Literature—any one of the optionals on pages 49, 50.

Second Term:

Piano, twice a week. Professor Preyer.
 Composition (musical forms), once a week. Professor Penny.
 Counterpoint. Once a week. Professor Preyer.
 History of the Fine Arts. Professor Penny.
 Seminary, Wednesdays. Professor Penny.
 Oratorio, once a week (optional). Professor Penny.
 Recitals and Ensemble.
 Two forensics.
 One of the following optionals may be taken:
 Voice Culture and Singing, twice a week. Professor Farrell.
 Drawing and Painting, three times a week. Professor Clark.
 Elocution and Physical Training, three times a week Professor Vickrey or Mrs. Smith.
 German, three times a week. Mr. Engel.
 English Literature—any one of the optionals on pages 49, 50.

FOURTH YEAR.

Requirements for entrance: Grades in studies of previous years; Mendelssohn, Variations Serieuses; Beethoven, Sonata, op. 31; Chopin, op. 10, Nos. 5 and 12; Kullak, Octave Study, No. 5, or equivalent.

First Term:

Piano, twice a week. Professor Preyer.
 Composition (variation forms, rondo, sonata), once a week. Professor Penny.
 Canon and Fugue, once a week. Professor Preyer.
 History of Music, weekly lecture. Professor Penny.
 Recitals and Ensemble.
 Two forensics.

Second Term :

Piano, twice a week. Professor Preyer.

Composition (instrumentation, string quartette, overture, cantata),
once a week. Professor Penny.

Canon and Fugue, once a week. Professor Preyer.

Graduating thesis.

The work in piano, outlined in brief, is as follows: Koehler's Virtuosity Studies; Bach's Inventions, English Suites, and Well-tempered Clavichord; Carl Reinecke's School of Etudes from Cramer, Clementi, Thalberg, Moscheles, etc.; Kullak's School of Octave Playing; Chopin's ops. 10, 25; Rubinstein, op. 23; Liszt's Transcendentals; concert pieces, concertos, etc.; Henselt, op. 125; Liszt, Concert Etudes.

*Artists' Courses**In Piano, Voice, Violin, Organ or Musical Composition.*

These courses are the same as the collegiate courses in these subjects, requiring for graduation a graduating recital or a program of original musical compositions.

For entrance and continuation in these courses the highest grade will be required in all examinations in piano, voice, organ, violin, or composition. The Senior work in composition, canon and fugue may be omitted in the piano, voice and violin courses.

Collegiate Course in Voice.

Leading to the degree of bachelor of music.

FIRST YEAR.

First Term :

Voice, twice a week. Professor Farrell.

Harmony, twice a week. Professor Penny.

English, B I. Mr. Jones and Mr. O'Leary. Hours, 8 or 11.

Italian, twice a week. Professor Farrell.

Seminary, Wednesdays. Professor Penny.

Recitals.

Second Term :

Voice, twice a week. Professor Farrell.

Harmony, twice a week. Professor Penny.

English, A I. Mr. O'Leary. Hours, 8 or 10.

Italian, twice a week. Professor Farrell.

Seminary, Wednesdays. Professor Penny.

Recitals.

SECOND YEAR.

First Term :

Voice, twice a week. Professor Farrell.

Harmony, twice a week. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Choir and Church Music, once a week. Professor Penny.

Recitals.

Three themes.

One of the following optionals may be taken:

Piano, three times a week. Professor Preyer.

Elocution, three times a week. Professor Vickrey or Mrs. Smith.

Free-hand Drawing, three times a week. Professor Clark.

German, three times a week. Mr. Engel.

English Literature, daily:

Nineteenth Century, Professor Dunlap; or American Literature, Professor Hopkins; or Bacon and Milton, Mr. Jones.

Second Term.

Voice, twice a week. Professor Farrell.

Polyphonic Forms, Fugal Analysis, twice a week. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Church and Choir Music, once a week. Professor Penny.

Advanced English Composition. Professor Hopkins and Mr.

O'Leary. Hours, 8 and 9, Monday, Wednesday, and Friday.

Recitals.

One of the following optionals may be taken:

Piano, twice a week. Professor Preyer.

Elocution, three times a week. Professor Vickrey or Mrs. Smith.

Free-hand Drawing, three times a week. Professor Clark.

German, three times a week. Mr. Engel.

English Literature (eighteenth century), daily. Mr. Jones, 8 or 11.

THIRD YEAR.

First Term.

Voice, twice a week. Professor Farrell.

Oratorio, once a week. Professor Penny.

Composition (musical forms). Professor Penny.

Counterpoint. Professor Preyer.

History of the Fine Arts, weekly lecture. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Acoustics and Optics, twenty lectures. Professor Blake.

Two forensics.

One of the following optionals may be taken:

Piano, twice a week. Professor Preyer.

Elocution and Physical Training, three times a week. Professor Vickrey or Mrs. Smith.

Drawing and Painting, three times a week. Professor Clark.

German, three times a week. Mr. Engel.

English Literature—any one of the list on pages 49, 50.

Second Term :

Voice, twice a week. Professor Farrell.
 Composition (musical forms). Professor Penny.
 Counterpoint. Professor Preyer.
 History of the Fine Arts, weekly lecture. Professor Penny.
 Opera, once a week. Professor Penny.
 Two forensics.

One of the following optionals may be taken :

Piano, twice a week. Professor Preyer and assistant.
 Elocution and Physical Training, three times a week. Professor Vickrey or Mrs. Smith.
 Drawing and Painting, three times a week. Professor Clark.
 German, three times a week. Mr. Engel.
 English Literature—one one of the list on pages 49, 50.

FOURTH YEAR.

First Term :

Voice, twice a week. Professor Farrell.
 Composition. Professor Penny.
 Canon and Fugue. Professor Preyer.
 Oratorio, once a week. Professor Penny.
 History of Music, weekly lecture. Professor Penny.
 Two forensics.

Second Term :

Voice, twice a week. Professor Farrell.
 Composition. Professor Penny.
 Canon and Fugue. Professor Preyer.
 Opera, once a week. Professor Penny.
 Dramatic Action. Professor Vickrey.
 Graduating thesis.

***Normal Course in Public-School Music and
Singing at Sight.***

Two Years. The study of notation, intervals, scales, singing at sight, elementary harmony, thorough study of the system used, management of children's voices, methods of teaching the subject in graded schools, etc., combined with practical drill in the class room. Tonic sol-fa and staff notation are both used.

The first year's work is an optional with elocution, required of all Freshmen and Sophomores in the School of Arts.

The second year consists of private instruction, in voice culture, in connection with the regular Freshman work—harmony, seminary, and oratorio.

Course in Violin.

See special catalogue.

This course is the same as the course in piano, with the exception that violin is substituted throughout for piano.

FIRST YEAR.

Herman's Violin School, vol. I.

Wichtl School, book I.

Kayser, thirty-six studies, book I.

Duets and compositions by Daub, Dancla, Bruni, Herman, Pleyel, and Kron.

SECOND YEAR.

Herman's Violin School, vol. II.

Kayser, thirty-six studies, books II and III.

Dont, Gradus ad Parnassum.

Schradieck, technic.

Viotti and Dancla, duets.

Fantasies and compositions by Singelee, Leonard, Papini, Herman, Alard, and De Beriot.

THIRD YEAR.

Bendix, scale studies.

Schradieck, scales and technic.

Kreutzer, forty studies.

Fiorrillo, thirty-six studies.

Mazas, artistic duets.

Concert studies and compositions by Leonard, Papini, David, De Beriot, Sauret, Viotti, Rode, and Kreutzer.

FOURTH YEAR.

Rode, thirty-six studies.

Dancla, twenty studies.

De Beriot concerts.

Mendelssohn concert.

Sauret and David concert pieces.

Wieniawski concert pieces.

Spohr concerts.

Vieuxtemps concert pieces.

Beethoven concert.

Bruch concert.

Sarasati.

Course in Pipe-Organ Playing and Church Music.

This department now offers to students intending to become professional church musicians, organists and choir masters special facilities for the study of pipe-organ playing in connection with the service of the church and for concert work. The most complete pipe-organ in the state has been erected in University Hall by the firm of Wm. King & Sons, of New York. The organ has three manuals, thirty-two stops, with twelve combination accessories. The organ consists of an electric action, with a movable console, attached by means of a fifty-foot cable. An electric motor runs the organ.

The following is an *outline of the course*, leading to the degree of bachelor of music:

FIRST YEAR.

First Term :

Piano, twice a week. Professor Preyer.

Voice Building for Speech and Song, class work, once a week.
Professor Penny.

Harmony—Concords and Discords, twice a week. Professor Penny.

English, *B I.* Mr. Jones and Mr. O'Leary.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble Playing.

Second Term :

Piano, twice a week. Professor Preyer.

Voice, class work in sight singing, once a week. Professor Penny.

Harmony—Modulations, Inharmonic Tones, Harmonization of
Hymn Tunes, twice a week. Professor Penny.

English, *A I.* Mr. O'Leary.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble.

SECOND YEAR.

Requirements for Entrance: Grades in studies of previous year; Bach's Three-voiced Inventions; Cramer; Bulow, Etudes, selected; Haydn, Variations in F minor; Beethoven, Sonata, op. 14, No. 2, or equivalent.

First Term :

Piano, twice a week. Professor Preyer.

Harmony—Original Work with "Materials," Harmonization of
Original Hymn Tunes, twice a week. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble.

Three themes.

One of the following optional studies may be taken.

Voice.

Free-hand Drawing.

German.

Elocution.

English Literature.

} (See piano course.)

Second Term.

Organ, twice a week. Professor Penny.

Composition (polyphonic music, fugal analysis), twice a week.
Professor Penny.

Ecclesiastical Music and Hymnology—the Early Christian
Church, Gregorian Tones. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Recitals and Ensemble.

Advanced English Composition. Professor Hopkins and Mr. O'Leary.

One of the following optionals may be taken:

Voice.

Free-hand Drawing.

German.

Elocution.

English Literature.

THIRD YEAR.

Requirements for entrance: Grades in studies of previous year.

First Term:

Organ, twice a week. Professor Penny.

Composition (musical forms), once a week. Professor Penny.

Counterpoint, once a week. Professor Preyer.

Ecclesiastical Music and Hymnology—Mediaeval and Reformation Periods. Professor Penny.

History of the Fine Arts, lectures once a week, with outside reading. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Acoustics and Optics, twenty lectures. Professor Blake.

Oratorio, once a week. Professor Penny.

Choir once a week.

Recitals and Ensemble.

Two forensics.

One of the following optionals may be taken:

Voice.

German.

Elocution.

English Literature.

Drawing and Painting.

Second Term:

Organ, twice a week. Professor Penny.

Composition (musical forms), once a week. Professor Penny.

Counterpoint, once a week. Professor Preyer.

Ecclesiastical Music and Hymnology—Analysis of Hymns, Study of Psalms and Psalteries. Professor Penny.

History of the Fine Arts, lectures, with outside reading, essays, etc. Professor Penny.

Seminary, Wednesdays. Professor Penny.

Oratorio, once a week. Professor Penny.

Choir and Congregational Singing.

Recitals and Ensemble.

Two Forensics.

One of the following optionals may be taken:

Voice.

German.

Elocution.

English Literature.

Drawing and Painting.

FOURTH YEAR.

Requirements for entrance: Grades of studies of previous year; second year of one of the optional studies (voice, piano, German, or elocution).

First Term:

Organ, twice a week. Professor Penny.

Composition (variation forms, rondo, sonata), once a week. Professor Penny.

Canon, Fugue, once a week. Professor Preyer.

History of Music, lectures, with outside reading and essays. Professor Penny.

Ecclesiastical Music and Hymnology — History of English Psalmody.

Recitals and Ensemble.

Two forensics.

Second Term.

Organ, twice a week. Professor Penny.

Composition (instrumentation, string quartette, overture, cantata), once a week. Professor Penny.

Canon, Fugue, once a week. Professor Preyer.

History and Development of Church Music. Professor Penny.

Graduating thesis.

The following is an outline of the work in organ:

First Year.—(See piano course.)

Second Year.—(See piano course.)

Organ.—Manual and Pedal Studies, Dr. John Stainer (London).

Third Year (Organ).—Dudley Buck's Choir Accompaniment; Bach's Easy Preludes and Fugues; Buck's Study in Pedal Phrasing; selections from "Church and Concert Organist," Eddy, "The Organist," Whiting, etc.

Fourth Year (Organ).—Extempore playing, Bach's Fugues; sonatas by Mendelssohn, Merkel, and Bach; accompaniments for solos, masses, cantatas, and oratorios: compositions by Best, Guilman, Ritter, Saint-Saëns, Thiele, Widor, Eddy, etc.

It will be seen that the study of the organ is not taken up until the middle of the Sophomore year, and that a pianoforte preparation is required of all regular students. Special students, however, may register for organ alone, at any time. The musical services of the Episcopal, Roman Catholic and Lutheran churches are especially studied, as well as the services of the Methodist, Presbyterian, Baptist, Congregational and other churches.

Course in Drawing and Painting.

Leading to the degree of B. P. (bachelor of painting).

The additional requirements for admission to this course will consist of an examination of the pupil's ability as a draughtsman.

Those who are deficient in entrance requirements or whose time is limited may enter as special students. The work is the same as the regular course, omitting English, German, and voice.

FIRST YEAR.

Drawing in Charcoal from Solid, every day. Professor Clark.
English, *B* I, 1st term; English, *A* I, 2d term. Mr. Jones and Mr. O'Leary.

Physical Training, twice a week. Mrs. Smith.

Seminary, Wednesdays.

First Steps in Perspective, Clay Modeling. Professor Clark.

Voice, class work. Professor Penny.

SECOND YEAR.

Drawing from Cast, Figure, Head, Interior, every day. Professor Clark.

Seminary, once a week.

Water Color—studies from still life and drapery.

Decorative Design.

Anatomy—perspective, composition, arrangement.

Sketching from Nature, in black and white—landscape, animals.

Professor Clark.

Three themes each term.

One of the following optionals:

Elocution, three times a week. Professor Vickrey.

Voice Culture and Singing, three times a week. Professor Farrell.

Piano, twice a week. Professor Preyer.

German, three times a week. Mr. Engel.

French, daily. Professor Galloo.

English Literature—

First term:

Nineteenth Century.

American Literature.

Bacon and Milton.

Second term:

Eighteenth Century.

THIRD YEAR.

Oil, Pastel, and Water-color Studies, from fruit, game, still life, drapery, and interior.

History of the Fine Arts, weekly lecture. Professor Penny.

Comparative Anatomy. Professor Dyche.

Seminary.

Acoustics and Optics, twenty lectures. Professor Blake.

Original Compositions in black and white.

Pen Drawing.

Charcoal—portraits, heads, and figure studies.

Sketching from Nature and Color.

Two forensics, 1st term.

Advanced English Composition, three times a week, 2d term.

Professor Hopkins and Mr. O'Leary.

One of the following optionals:

Voice.

Piano.

Elocution and Physical Training.

German and French.

English Literature.

FOURTH YEAR.

Advanced Painting—portrait, draped figure, landscape composition, interiors.

History of the Fine Arts. Professor Penny.

History of Greek Art. Professor Wilcox.

Two forensics, 1st term.

Original Composition in color.

Graduating painting and thesis.

One of the following optionals:

Voice.

Piano.

Elocution and Physical Training.

German or French.

English Literature.

Description of the Courses.

HARMONY, COUNTERPOINT, AND COMPOSITION.

The school offers a course of study covering four years. In the first year the work treats of intervals and scales, formation and progression of chords, modulations, suspensions, etc., with practical work in harmonizing chants, chorals, and original melodies, analyzing compositions, and ear drill. The subject of harmony is treated melodically from the beginning. In the second year follows the analysis of polyphonic forms—the two- and three-voice invention—choral figuration, fugue and canon. Composition is then taken up in the third year—the phrase period, two-part song, three-part song, etc., song with trio, with original work in such forms as the minuet, gavotte, romanza, etude, etc., vocal solos, terzettes for female voices, quartets and choruses. In this (third) year the study of counterpoint strict and free is likewise carried on, followed by that of canon and fugue in the Senior year. In the Senior year the variation and rondo forms are the subject of composition, then the sonatine and

sonata, and finally instrumentation for string quartet, wood wind instruments, ordinary full orchestra, modern full orchestra, vocal solo and chorus with orchestra—overture—cantata.

MUSICAL HISTORY, THEORY, AND LECTURES.

The work in musical theory and analysis includes acoustics, instrumentation, and lectures upon musical art, embracing the gradual development of music from ancient to modern times. Lectures are also given upon the important points in vocal culture, and a course upon the history of the fine arts, by the Dean.

SEMINARY.

The Seminary is designed especially for students fitting themselves for teachers, although all students of the school are required to attend. The work consists of lectures on the methods of teaching; papers and discussions by students; careful study of the system in use in the school, which aims to combine equally the melodic and harmonic elements of music with the technical, and the examinations of other systems.

DRAWING AND PAINTING.

The basis of all art work is good drawing, and this is insisted upon throughout the course.

The course of study includes systematic and progressive instruction in the theory, history and practice of drawing and painting, decorative design, and in those other branches which bear most intimately and directly upon these arts.

Special advantages are offered to those wishing instruction in illustration. The natural scenery of Lawrence is particularly fine for landscape study. Models for portrait study are abundantly provided, and this work is a strong feature of the course.

Pupils will have access to the classical museum containing a good collection of antique casts.

ELOCUTION AND PHYSICAL TRAINING.

The course embraces a systematic course of body building and training, to correct physical defects and insure physical control. The best ideas of the Swedish, Delsarte, German and American systems are taught, with gymnasium practice and floor drill. Modern text-books on elocution are discussed so that the student may become acquainted with all systems. Artificial methods are eradicated, and the best of the true self is developed. Especially valuable to the student of vocal and instrumental music, and of painting, has been the work in physical training and elocution.

UNIVERSITY CHORUS.

This chorus is made up of two distinct organizations—the St. Cecilia Society and the University Glee Club. As the number of voices forming each club is limited, only the best singers are selected.

These form a mixed chorus of about sixty voices, which meets weekly for the study of choral music.

The two clubs meet separately for the study of glees, etc., for male voices, and part songs, etc., for female voices. The Glee Club makes an annual concert tour of the state.

ORATORIO SOCIETY.

This society consists of students and Lawrence singers. It meets weekly for the study of oratorios. The "Messiah," "Creation," "Redemption" and other oratorios have been given. One or two are given annually.

PUPILS' RECITALS AND ART EXHIBITS.

Recitals are given weekly by the professors and students of the school. Every student is obliged to attend these recitals and all concerts, and take part in the programs from time to time.

There will be an exhibit each year of pupils' work in drawing and painting.

CONCERTS.

Concerts are frequently given in North College and in University Hall by the professors and advanced students of the school, and by outside talent and professionals. Every student of the school is required to attend these concerts.

LIBRARY.

In addition to the general library facilities of the University, students of the school have access to a choice collection of works on the history of music, vocal and orchestral, scores of operas, symphonies, chamber music, oratorios and cantatas, bound periodicals, pianoforte and organ music, etc. To this collection additions are constantly being made by purchase, donations, and loans. Students are urged to avail themselves as much as possible of the library facilities of the University, as an aid to intelligent and appreciative work in technical lines.

Requirements for Graduation.

Candidates for the degree of Mus. B. must complete one of the required courses of study (piano, voice, violin, organ).

In the collegiate course, each graduate must present a thesis showing original investigation in some department of musical science or art. In the artists' course, each graduate must present a thesis, and perform in public during the last year of study a concert program, or prepare a program of original compositions in small and large forms.

In the painting courses, the following is the examination given during the last month of the Senior year: Artistic anatomy; artistic perspective; one charcoal head; one painted head; one painted draped figure; one painted interior; one historical composition; one emblem-

tical composition; a thesis showing original investigation in some department of drawing and painting.

DEGREES CONFERRED.

Graduates of all the courses in piano; organ, violin and voice will receive the degree of bachelor of music; graduates in painting will receive the degree of bachelor of painting.

SPECIAL CATALOGUE.

A special catalogue of the School of Fine Arts will be sent on application to the Registrar of the University.

EXAMINATION AND REGISTRATION.

Examinations are held at Music Hall on Friday and Saturday, June 9 and 10, and on Wednesday and Thursday, September 6 and 7, 1899. Students can enter the regular courses only at the beginning of the collegiate year, and must present themselves for registration on the above dates. Registration at a later date will be permitted only on the presentation of a satisfactory reason for the delay.

Rates of Tuition.

An incidental fee of one dollar per quarter (included in the regular tuition below) is charged for membership in the school. This fee is used for concerts, lectures, and for the securing of other advantages to the student.

Instruction during the first and second years in pianoforte playing, voice culture and organ is given in hour classes of four or three students, two lessons weekly; in the third and fourth years, private lessons. The year consists of four quarters or half terms of nine weeks each—all bills payable quarterly in advance. These prices include all the theoretical and collegiate studies.

First Year: Piano or organ, \$28.50 per quarter. Voice, \$31 per half term. Violin, \$26.50.

Second Year: Piano, voice, or organ, \$31 per quarter (without optionals).

Third Year: \$33.50 per quarter (without optionals), piano, three in class. Voice, \$31 (without optionals).

Fourth Year: Free to Kansas students, or \$35 per term to non-residents.

Drawing and painting, \$15 per quarter; three lessons a week, each lesson three hours in length.

Elocution, \$25 per quarter.

School of Pharmacy.

Faculty.

F. H. SNOW, *President.*

L. E. SAYRE, *Dean,*
Pharmacy and Materia Medica.

E. H. S. BAILEY,
Chemistry and Toxicology.

A. P. MATHEWS,
Physiology.

E. HAWORTH,
Mineralogy.

W. C. STEVENS,
Botany.

E. C. FRANKLIN,
Chemistry.

A. ST. C. DUNSTAN,
Physics.

M. A. BARBER,
Botany.

GEORGE WAGNER, *Secretary,*
Pharmacy.

EDWARD BARTOW,
Chemistry.

EUGÉNIE GALLOO,
French.

HANNAH OLIVER,

Assistant in Latin.

E. F. ENGEL,

Assistant in German.

Course A.—Two Years.

This course embraces two years of two terms each, and the various studies included in it are usually carried during the whole term or half term, and, being progressive, it is with extreme difficulty that a student advances in his work satisfactorily unless he enter at the beginning of the University year, in September. The studies in the pharmacy course are of a very practical character and largely relate to the applied sciences. They give the student ample preparation for the responsibility connected with the practice of pharmacy and for special work in the lines of analytical chemistry and the examination of foods and medicines.

REQUIREMENTS FOR ADMISSION.

The candidate must pass an entrance examination in the following studies:

1. Arithmetic, including the Metric System.
2. History of the United States.
3. Geography, Descriptive and Physical.
4. English Grammar and Composition.
5. Constitution of the United States.
6. Physics.

ADMISSION BY CERTIFICATE.

Students will be admitted to this school without examination, upon presentation of the required certificate, as in the School of Arts. For times and places for application for admission and examination, see page 32.

JUNIOR YEAR.*

First Term:

Pharmacy (*a*), every day, at 9. Professor Wagner.
 Pharmacognosy (*b*), every day, at 9. Professor Wagner.
 Physics (*a*), every day, at 11. Professor Dunstan.
 Pharmacy Laboratory (*a*), every day, 1 to 3. Professor Wagner.
 General Chemistry, every day, 3 to 5. Professor Franklin.

Second Term:

Latin, every day, at 8. Miss Oliver.
 Pharmacognosy (*a*), every day, at 9. Professor Wagner.
 Pharmacy (*b*), every day, at 9. Professor Wagner.

*This program is subject to change. The course as outlined in the special catalogue of the School of Pharmacy, issued later, is the one that will be followed.

Qualitative Analysis (*a*), every day, 3 to 5. Professor Bartow.
 Pharmacy Laboratory (*b*), every day, 3 to 5. Professor Wagner.
 Botany I, every day, 1 to 3. Professor Stevens and Professor Barber.

SENIOR YEAR.

First Term:

Histological Botany (*a*), every day, 8 to 10. Professor Barber.
 Physiological Chemistry (*b*), every day, 8 to 10. Professor Sayre.
 Pharmacy (*a*), every day, at 10. Professor Sayre.
 Microscopical Examination of Drugs (*b*), every day, at 10. Professor Sayre.
 Toxicology (*b*), every day, at 11. Professor Bailey.
 Quantitative Analysis (*a*), every day, 3 to 5. Professor Bartow.
 Drug Assay (*b*), every day, 3 to 5. Professor Sayre and Professor Wagner.

Second Term:

Physiology (*b*), every day, at 10. Martin's Briefer Course. Professor Mathews.
 Mineralogy (*a*), every day, 9 to 11. Professor Haworth.
 Organic Chemistry, every day, 1 to 3. Professor Franklin.
 Plant Analysis (*a*), every day, 3 to 5. Professor Sayre and Professor Wagner.
 Thesis.

The instruction in the studies outlined above consists of lectures, recitations, and laboratory practice. The two subjects, materia medica and pharmacy, continue without interruption through the two college years.

In the study of botany, physics, mineralogy, and other subjects which are common to the various departments of the University, the student recites with the collegiate classes.

PRIVILEGES.

This school is an integral part of the University, and students in pharmacy have all the privileges of the University accorded to regular students, such as admission to the library and to the various collections of zoölogy, mineralogy, and botany.

REQUIREMENTS FOR GRADUATION.

The degree of Ph. C. (pharmaceutical chemist) will be given to such students as complete the above course and pass a satisfactory examination upon the same. Experience in the drug business is no longer required for graduation.

Course B.—Four Years.

Leading to the degree of bachelor of science.

The requirements for admission to this course are the same as those in the School of Engineering.

FIRST YEAR.

First Term:

Chemistry.
Algebra.
English.

Second Term:

Qualitative Analysis.
Scientific German.
English.

SECOND YEAR.

First Term:

Physics.
Quantitative Analysis.
Scientific French.

Second Term:

Advanced Inorganic Chemistry.
Physics.
Materia Medica (a).
Pharmacy (b).

THIRD YEAR.

First Term:

Pharmacy (a).
Materia Medica (b).
Pharmaceutical Chemistry.
Mineralogy (b).
Assaying (a).

Second Term:

Pharmacy Laboratory.
Organic Chemistry.
Structural Botany.

FOURTH YEAR.

First Term:

Bacteriology (a).
Organic Preparations.
Physiological Chemistry (b).
Physiology.

Second Term:

Therapeutics (b).
Plant Analysis (a).
Microscopic Study of Drugs (a).
Original Research (b).
Thesis.

EXAMINATIONS.

At the end of each course examination will be held by the Faculty in such manner as may hereafter be prescribed.

Fees for Course A.

In the Junior year, the following fees are to be paid in advance by the student:

A pharmacy laboratory fee of \$20, to cover loss, breakage, gas, and use of material in the laboratory. Any balance unexpended at the end of the year is returned to the student.

General chemistry fee, \$12.

Qualitative analysis, \$8.

Any balance unexpended of chemistry fees at the end of each course is returned to the student.

A physical laboratory fee of \$2.

A botanical laboratory fee of \$2.

In the Senior year, the following fees are to be paid in advance by the student:

A pharmacy laboratory fee of \$20, as in the Junior year.

Pharmaceutical quantitative analysis, \$8.

Organic chemistry, \$10.

Any balance unexpended of chemistry fees at the end of each course is returned to the student.

A botanical laboratory fee of \$2, to cover the work in structural botany.

A mineralogical laboratory fee of \$1.50.

The yearly fees for course B will be similar in amounts to the above.

No student will be assigned a desk until the necessary fees are paid.

For details of the work of the department, consult its special catalogue, soon to be issued.

School of Engineering.

Faculty.

F. H. SNOW, *President.*

F. O. MARVIN, *Dean,*
Civil Engineering.

E. MILLER,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

E. H. S. BAILEY,
Chemistry.

A. G. CANFIELD,
French.

L. I. BLAKE,
Physics and Electrical Engineering.

E. M. HOPKINS,
English Language.

E. HAWORTH,
Physical Geology and Mineralogy.

W. C. STEVENS,
Botany.

E. C. FRANKLIN,
Chemistry.

H. B. NEWSON,
Mathematics.

F. E. WARD,
Electrical Engineering Shops.

EUGÉNIE GALLOO,
French.

A. ST. C. DUNSTAN, *Secretary*,
Physics and Electrical Engineering.

M. A. BARBER,
Bacteriology.

W. K. PALMER,
Mechanical Engineering.

EDWARD BARTOW,
Chemistry.

E. C. MURPHY,*
Assistant in Civil Engineering.

H. F. JONES,
Assistant in English.

E. F. ENGEL,
Assistant in German.

M. E. RICE,
Assistant in Physics and Mathematics.

THOMAS M. GARDNER,
Assistant in Drawing.

C. L. SEARCY,
Assistant in Civil Engineering.

.....
Assistant in French.

* Absent on leave during 1899-1900.

Admission.

Every person who applies for admission to the Freshman class in the School of Engineering is required to be examined in the various subjects mentioned below, or to present a certificate from high school, academy, or college, as explained under "Admission by Certificate." An applicant may be admitted, although deficient in some of these requirements, provided such deficiency does not exceed two* terms' work; but all deficiencies must be made good within one year from the time of admission.

Requirements for Admission.

Physical Geography.

General History.—Myers, Sheldon, Barnes, or Fisher.

Civil Government.—Thorpe and Hodder's Civil Government of the United States and Kansas, or equivalent.

Algebra.—Through quadratic equations, radicals, and theory of exponents.

Geometry.—Plane and solid.

Physics.—Appleton's School Physics; Gage's Elements of Physics.

English.—One year. See pp. 25, 27.

French.—One year.† See p. 26.

German.—One year.† See p. 27.

For admission by certificate, see p. 28.

Special Students.—It is designed to give every opportunity for study and research to persons of mature age not enrolled as regular students, who wish and are prepared for special practical work in the lines of engineering offered by this school. Courses will be arranged for such individually, as their experience and training have qualified them.

The admission of such students and the general oversight of their work is under the control of a committee of the Engineering Faculty. All special students are subject to the same regulations as other students, except as to the number of studies taken at one time.

Changes in Requirements.

Beginning with the college year 1900-'01, the requirements will be as follows:

Physical Geography.

Physics.—One year.

Chemistry.—One year.

Algebra.—Through quadratic equations, radicals, and theory of exponents.

* A "term's work" signifies one study pursued daily for a period of half a year

† Students having credit for three years of Latin, as outlined on p. 28, or two years of Latin and one year of either French or German, may be excused from either the French or German required in the engineering course.

Geometry.—Plane and solid.

Free-hand Drawing.—One year of high-school work.

General History.—Myers, Sheldon, Barnes, or Fisher.

English.—Two years.

German.—Two years.

French.—One year.

Beginning with the fall of 1900, three years of Latin may be temporarily substituted for either French or German required for entrance; but all this required French and German must be completed before graduation. If Latin is so used, no other entrance condition will be allowed.

Facilities.

The school is well equipped with apparatus of modern pattern, and from the best makers.

Engineer's Instruments. These comprise transits, levels, compasses, solar attachments, rods, chains, tapes, plane tables, heliotropes, current meter, aneroids, and other minor instruments. Among the above are a precise level for very accurate leveling, a secondary triangulation transit for topographical work, and an altazimuth instrument for use on primary triangulations, and which has a ten-inch circle, read to single seconds of arc. These three instruments are from Fauth & Co., of Washington, D. C.

For the summer work in surveying a complete camping outfit is provided. Planimeters, Thatcher and Manheim slide rules and Colby's stadia slide rule are used for rapid calculation and estimation of quantities.

Drawing-rooms. These are well lighted and provided with large tables. They are furnished with many photographs of actual constructions and the cases contain large numbers of blue-prints of working drawings for bridges, railways, sewers, machinery, etc.

Laboratories. Excellent facilities are offered for practical work in the laboratories of all departments. The rooms devoted to botany are equipped with microscopes, various forms of microtomes, and apparatus for dissecting plants or aiding in the study of their life-histories. The student of sanitary engineering finds the bacteriological laboratory supplied with a large number of the low forms of plant life that affect his work and with the means for cultivating them and studying their habits. The department of physical geology and mining possesses a large collection of minerals and samples of rocks which are of economic value and the necessary apparatus for their examination and identification. The laboratories of the department of physics and electrical engineering are referred to on page 16.

The work of the chemistry department is done in the chemistry building, where there are three laboratories, a lecture room, balance

room, store room, etc., and in five rooms in the basement of Fraser Hall. There is a good supply of apparatus and material for illustration. The students are given the advantage of the use of chemicals and glassware that are imported duty free. Belonging to this department are assay furnaces for the analysis of ores of gold and silver; combustion furnaces for organic analysis; a saccharimeter for sugar determinations; apparatus for the determination of vapor density; apparatus for gas analysis, for water analysis, for electrolytic analysis, and the usual supplies for advanced analytical work.

Provision was made by the last legislature for a new chemistry building, which will greatly add to the facilities of this department. (See page 15.)

For Mechanical Engineering.—Space is allotted in the two laboratory rooms in the east end of the Fowler shops for experimental work, including calibration of engineering instruments, some of the minor experiments on steam, and dynamometer testing. In these rooms there is a complete Westinghouse air-brake equipment, the gift of the Westinghouse Air Brake Company, which serves to illustrate the use of the air-brake in train service and to provide a supply of compressed air for experimental purposes and for operating compressed-air-driven tools and appliances. A four-horse-power gas engine, the gift of the Witte Gas Engine Company, of Kansas City, Mo., is also to be installed here, arranged for complete tests using either gas or gasoline and either tube or electrical igniter.

In the west end of Fowler shops, in close connection with the large battery of boilers, space is provided especially for steam-engineering work. Here is a special boiler suited to testing purposes, and castings are ready for an experimental engine to be constructed in the shops for this laboratory. Still another engine of different type is to be provided for engine experiments, and also pumps, injectors, gauges, pyrometers, flue-gas apparatus, and other accessories.

For work in the testing of the strength of materials there is provided an Olsen tension and compression machine of 100,000 pounds capacity, provided with extensometers for accurate tests by tensile or compressive strains, and capable of serving also for transverse and torsional tests, by use of attachments; a new 50,000-pound Olsen torsion machine, especially for torsional tests of large specimens; in addition to which there is a special transverse testing machine in course of construction, designed to test a specimen of any length from eighteen inches up to ten feet with a bending force up to 50,000 pounds.

In one of these rooms space is set apart for special work in the testing of hydraulic cements, a briquette testing machine and the necessary briquette molds, etc., being provided.

Provision is made for additional apparatus for the testing of materials and for the equipment in hydraulics and steam testing.

The Fowler Shops. (See page 14.) This building contains in the boiler-room two Erie City return-flue 16' x 66" high-pressure boilers, also a 14-horse-power experimental boiler, with injector, water meter and accessories required for tests. Adjoining is the engine-room, in which is a Russell four-valve medium-speed engine of 150 horse-power and also a 35-horse-power Armington & Sims high-speed engine. Both these engines are fitted with indicator connections and reducing gears. These two couple conjointly or independently on a short main-line shaft, from which are run the various power and lighting generators. These at present consist of one 1000-volt 60 K. W. General Electric alternator; one 65 K. W. Siemens & Halske D. C. 125 volts; one 17½ K. W. General Electric D. C. 125 volts; one T. H. 50-light arc. Some sixteen independent circuits run from a central switch-board to various buildings and laboratories of the University, so that varieties of currents are always available. In the engine-room is also a Cookson feed-water heater, Cochran separators for each engine, and a Lyman exhaust head. Here, also, are installed a duplex 18 x 12 x 10 steam-pump, and a 6 x 6 x 5 steam fire-pump for the water-supply of the University. The forge and foundry room, 50 x 40, contains twelve Sturtevant down-draft forges, with anvils and all usual smithing tools; there is also provided one large forge for heavier work. The brass foundry is not yet equipped. The metal-working room, which is 80 x 50, has 160 feet of benches, with twenty vises and usual bench tools.

In the shops proper there are, at present, four 14" x 6' Standard engine-lathes; one 18" x 12' Challenge engine-lathe, with all attachments; one crank shaper; one 25" Challenge drill-press, with back gear and self feed; one Universal cutter and reamer grinder; one 20" drill-press, with hand feed; one ½" bolt cutter; one ½ Universal milling machine, with spiral gear, cutter, and attachments; all the above made by the American Tool Works Company, Cincinnati, Ohio. Also, one 26" x 26" x 7' Gray planer. There are also power band-saws, grinders, grindstones, etc., usually found in well-equipped shops. The line shafting is divided independently into three sections by, friction clutch couplings, and is run by a Westinghouse four-pole, 15-horse-power motor. The tool-room, under care of an attendant, is well furnished with small tools and supplies, which are delivered to students on the check system. This room also contains a 14" x 5' Challenge engine-lathe, with drawbar chucks and a power drill, both made by the American Tool Works, a Yankee drill grinder, all run by an electric motor. An electric freight elevator connects with the wood-working room above. In this latter room, 80' x 50', there is at present 100 feet of wood benches with small tools, one 12" speed lathe of 6' bed; one 18" x 12' pattern-maker's lathe, with iron shears and traveling slide rest and cross-feed; also floor stand and rear fall plate; one scroll-saw; one combination cross-cut and rip-saw with jointer head and boring attachment; one miter saw and Universal trimmer;



THE FOWLER SHOPS. UNIVERSITY OF KANSAS.

the shafting is run by electric motor. Opening from this is a wash-room, 40 x 20, with stone floor and 112 lockers. In the various benches are also 160 drawers reserved with the lockers for the students' use. On this floor is also the dynamo laboratory, 40 x 50. In this, at present, is a central line shaft, operated at constant speed by a Siemens & Halske 15-horse-power motor. Split-wood pulleys of assorted diameters allow a great range of speed for motors and generators used for experimental study. Two standard Crocker & Wheeler 2 K. W. D. C. machines with removal coils for shunt, series and compound winding serve for D. C. experiments, and a small two-phase generator, together with the current from the larger alternator, is used in A. C. works.

The laboratory is well supplied with Weston and Whitney ammeters, voltmeters and wattmeters. There are at present seven types of 1000-watt transformers of the best American make for the study of efficiencies. It is proposed to develop this laboratory equipment to cover the best modern practice. A fifty-foot photometer room in the attic is to be equipped for incandescent-lamp tests. Through the beneficence of Mr. Fowler, and the opportunity afforded by the complete destruction of the old shops and machinery, the tools and electrical equipments are of the newest designs and types of the best present practice. While the Fowler shops were primarily donated for the mechanical and technical work of the electrical engineering department, two large rooms, 50' x 30', are used for the laboratories of the civil and mechanical engineering departments.

The Library.—The technological portion of the University library contains about 2500 volumes, while in the reading room are found the leading American and foreign engineering journals.

Courses of Instruction.

The School of Engineering offers five courses of instruction, viz.: The course in civil engineering (with an opportunity to specialize in hydraulics and sanitary engineering), the course in electrical engineering, the course in chemical engineering, the course in mechanical engineering, and the course in mining engineering.

The last two of these were established by the action of the Board of Regents in March, 1899, and these constitute the

New Courses of Study.

Mechanical Engineering.—The function of this new course is twofold: to offer to the students of the other engineering courses such lines of work as their particular needs require, and to afford to the students of the University an opportunity to specialize in the direction of the purely mechanical side of engineering. The purpose is to present an opportunity, not merely for mechanical training of a manual character, but for preparation of a high order in the scientific subjects in which the engineer must be thoroughly trained who

is to devote himself to the great questions involved in the designing, manufacturing and operating of machinery of every description. Especial stress will be laid upon the making of practical machine drawings, the designing of machinery, and the preparation of the necessary working drawings, the cultivation of the inventive ability, and a familiarity with the operations involved in the construction of engines, boilers, machinery, and mechanical appliances of all kinds.

Students thus prepared will find large opportunities open to them, in the designing of machinery and power equipments, and in the management of power plants and manufacturing establishments, in the production and development of valuable inventions, and in the work of the consulting engineer. Draftsmen, from whose ranks the higher places of the profession are filled, are constantly in demand, and one who is well equipped will always find suitable employment and opportunity for advancement.

Mining Engineering.—The object of the course in mining is to qualify students for future work in prospecting, mining, milling, and smelting, in accordance with modern scientific principles. In adopting the course of study, it was endeavored to include a sufficient requirement in language work to give the student a good knowledge of English and German, the two languages most widely used in mining localities throughout the world, and to adjust the various essential subjects, mathematics, engineering, chemistry, metallurgy, mining, mineralogy, and geology, so that upon the completion of the course one may be well qualified for specializing along any line which his future life may make desirable.

The requirements for admission to the course in mining engineering are the same as those given on page 85, to be required of all engineering students, beginning with the college year of 1900-'01.

Degrees.

All courses in the School of Engineering lead to the degree of *bachelor of science*.

All work for higher degrees is under the supervision of the Faculty of the Graduate School.

For the regulations governing the granting of advanced degrees and for statements of courses open to graduate students, see announcements under the head of "Graduate School."

List of Courses.

Following are given brief descriptions of the courses as carried by the several departments. The Roman numerals used are referred to in the tabulated statement of courses of study leading to a degree. A course marked (a) is given during the first half of a term; one marked (b), during the last half.

Botany.

I. The general morphology of plants; their relation to soils and environment. Their classification. Required of chemical engineers. Ten hours per week, 2d term. Freshman. Professors Stevens and Barber.

VI. BACTERIOLOGY. Lectures and laboratory work. The technique of making nutrient media, plate cultures, staining, embedding, etc. Arrangement may be made for giving special attention to pathogenic bacteria, to the bacteriological analysis of water-supplies and sewage, or any special phase of sanitary study. Required of civil engineering students taking the hydraulic and sanitary option. Last half of second term. Junior. Ten hours per week. Professor Barber.

Civil Engineering.

I. MECHANICS. The laws of statics and dynamics. Action of forces upon bodies and the resulting motions. Required of all engineering students. Daily. 1st term. Junior. Professor Marvin.

II. STRENGTH OF MATERIALS. Theory of resistance to stress and applications to engineering construction. Required of all engineering students. Four hours per week. 2d term. Junior. Professor Marvin.

III. TESTING LABORATORY. The testing of iron, steel, wood, and other materials, for resistance to compression, tension, torsion, bending, and shearing. Experimental determination of the limits of safe loading. Required of all engineering students. 2d term. Junior. Professor Palmer and Mr. Gardner.

IV. HYDRAULICS. The pressure and flow of liquids and gases—the force of and resistance to their motion. Required of civil, mechanical and mining engineering students. Daily. 1st term (a). Senior. Professor Marvin.

V. HYDRAULIC LABORATORY. Experimental work with flow of water over weirs, through orifices and pipes, and testing hydraulic machinery. Required of civil, mechanical and mining engineering students. Four hours per week. 1st term. Senior. Professor Palmer and Mr. Gardner.

VI. ROOFS AND BRIDGES. Analytical and graphical calculation of stresses in framed structures. Recitations and drawing. Required of civil and mechanical engineering students. Daily. 1st term. Senior. Professor Marvin.

VII. BRIDGE DESIGNING. Study of bridge details. Students work out a complete design for a plate girder and a simple truss. Recitations and drawing. Required of civil engineering students. Daily. 2d term. Senior. Professor Marvin.

VIII. SURVEYING. Engineer's instruments. Land, topographic, mining and hydrographic surveys. Leveling and earthwork. Rec-

tations and field work. Required of civil and mining engineering students. Daily. 2d term. Sophomore. Mr. Searcy.

IX. RAILWAY SURVEYING. Methods for laying out and constructing railways. Recitations and field work. Required of civil engineering students. Daily. 1st term. Junior. Mr. Searcy.

X. RAILWAY LOCATION. Principles involved in an economic location. Analysis of traffic and operating expenses. Methods of conducting field work for preliminary and location surveys. Required of civil engineering students. Daily. First three-fifths of 2d term. Junior. Mr. Searcy.

XI. ROADS AND PAVEMENTS. Materials for and methods used in their construction. Required of civil engineering students. Daily. Last two-fifths of 2d term. Junior. Mr. Searcy.

XII. SANITARY ENGINEERING. Collection, removal and disposal of sewage and other refuse. Relations to public health. Required of civil engineering students. Daily. 1st term (*a*). Senior. Mr. Searcy.

XIII. SANITARY ENGINEERING. Water-supply; its collection, storage, and distribution. Purification of polluted supplies. Required of civil engineering students. Daily. 2d term (*a*). Senior. Mr. Searcy.

XIV. MASONRY. Character of materials. Methods of cutting and dressing. Foundations. Masonry structures. Required of civil engineering students. Daily. 1st term (*b*). Senior. Mr. Searcy.

XV. CEMENT LABORATORY. Experimental work in testing cements and making comparison as to their quality. Required of civil engineering students. Four hours per week. 1st term. Senior. Mr. Gardner.

XVI. CONTRACTS AND SPECIFICATIONS. An elementary course on the law of contracts, with special reference to engineering practice. The technical features of specifications. Methods of procedure in letting and conducting contracts. Required of all engineering students. Daily. 2d term (*b*). Senior. Professor Marvin.

XVII. DRAWING. Shades, shadows, and perspective. Required of civil engineering students. Six hours per week. 1st term. Sophomore. Mr. Searcy.

XVIII. DRAWING. Topographical drawing and plotting of surveys. Required of civil and mining engineering students. Four hours per week. 2d term. Sophomore. Mr. Searcy.

XIX. DRAWING. Railway plats, profiles and plans for track and small structures. Lectures and drawing-room practice in tracing and blue-printing. Required of civil engineering students. Four hours per week. 1st term. Junior. Mr. Searcy.

XX. GRAPHICAL STATICS. Stresses in simple frames and in stone arches. Lectures and drawing. Required of civil engineering students. Four hours per week. 2d term. Junior. Mr. Searcy.

XXI. SUMMER FIELD WORK. Courses in practical surveying. Each year a part of the students do topographical work while others are engaged in running precise levels, laying out a short railway line, or making a hydrographic survey. All parties camp together. Required of Freshman and Sophomore civil engineering and mining students and of Junior civils. Ten hours per day for one month. Professor Marvin and Mr. Searcy.

Chemistry and Metallurgy.

I. GENERAL CHEMISTRY. This includes the elementary, theoretical part of the subject and a practical study of the elements and their compounds. This will include the source of each, its occurrence in nature, methods of preparation, properties, both physical and chemical, and uses. Laboratory exercises are required in connection with the course. Text-book, Remsen's Briefer Course. Required of engineering students, unless they have offered chemistry for entrance. Daily. 2d term. Freshman. Professor Bailey.

II. QUALITATIVE ANALYSIS. A study of the methods for the identification of the ordinary elements, either alone or in combination. A systematic system of identification and separation is followed, and the student is required to find out the composition of a large number of unknown substances, testing both for bases and acids. Laboratory work, with one lecture each week. Text-book, Bailey's Introduction to Qualitative Chemical Analysis. Required of engineering students except those in mining. Daily, 1st term, Sophomore, or 2d term (α), Freshman. Professor Bailey and Mr. ———.

VI. QUANTITATIVE ANALYSIS. A study of the balance and its use, specific gravity determinations, quantitative estimation gravimetrically of simple substances in compounds of known composition, and later in those of unknown composition. This is followed by work in volumetric analysis, the standardization of normal solutions, and the practical use of these solutions in the analysis of chemicals, minerals, and ores. Text-book, Fresenius's Quantitative Analysis. Required of chemical and mining engineering students. Daily, two hours. 1st term. Professor Bailey.

VII. QUANTITATIVE ANALYSIS (advanced). An extension of the previous course. During the latter part of this term special work may be done on the analysis of iron, fertilizers, sugar, or gas, as a preparation for some special line of technical work. Required of chemical and mining engineering students. Daily, two hours. 2d term. Professor Franklin and Professor Bartow.

VIII. INORGANIC CHEMISTRY. An advanced course in general chemistry, followed during the second half of the term by an introductory course in physical chemistry. Required of chemical, electrical and mining engineering students. Daily. 1st term. Professor Franklin and Professor ———.

IX. ORGANIC CHEMISTRY. A study of the simpler organic bodies, with the methods of preparation and decomposition. Lectures on Monday, Wednesday, and Friday, with laboratory work on Tuesday and Thursday, two hours. Text-book, Remsen's Organic Chemistry and Orndorff's Manual. Required of chemical engineering students. 2d term. Professor Franklin and Mr. ———.

XI. ASSAYING. A course in the fire assay of ores of gold, silver, lead, antimony, iron, etc., followed by a short volumetric course in the analysis of bullion, some of the most important methods for wet assay. Text-book, Brown's Assaying. Required of chemical and mining engineering students. Daily laboratory work and lectures. 2d term (b). Professor Franklin.

XIII. SANITARY AND APPLIED CHEMISTRY. The study of air, potable waters, fuels, heating, ventilation, lighting, disinfectants, foods, their adulteration, and tests for purity, methods for preparation of foods, the chemistry of digestion, etc. Required of students in chemical engineering. Daily lectures and laboratory exercises. 2d term. Professor Bailey.

XVII. INORGANIC PREPARATIONS. A study of the common methods for the preparation by precipitation, crystallization, sublimation and distillation of inorganic chemicals. Laboratory work. Required of chemical engineering students. 2d term (b). Professor Bailey.

XVIII. CHEMICAL TECHNOLOGY. In this course a careful study is made of the commercial methods in use in chemical manufacture. Lectures. Required of chemical engineering students. Daily. 1st term (b). Mr. ———.

XIX. METALLURGY. Fuels, refractory building materials, furnaces, air-heating devices, air blasts, etc. The metallurgy of iron, including the ores, and methods of manufacture of pig iron, wrought iron, steel, the Bessemer process, the open-hearth process, the composition of slags and fluxes, furnace gases, the utilization of by products, etc. Required of chemical, mechanical and mining engineering students. Lectures daily. 2d term. Junior. Professor Bailey.

XX. METALLURGY. A continuation of the previous course. This will include the metallurgy of lead, copper, zinc, tin, gold, silver, etc. Required of chemical, mechanical and mining engineering students. Lectures daily. 1st term. Senior. Professor Bailey.

Drawing.

I. USE AND CARE OF INSTRUMENTS. Geometrical construction drawing: drawing-board constructions for problems met in engineering drawing. Lettering: proper construction of letters of different styles; construction of titles. Freshman, 2 hours, twice a week. 1st term. Mr. Gardner. Required in all engineering courses.

II. FREE-HAND DRAWING. Use of the lead-pencil in sketching. Free-hand drawings from flat studies to train the eye to see curvature

and symmetry and the hand to draw what the eye sees. Freshman, 2 hours, once a week. 1st term. Mr. Gardner. Required in all engineering courses.

III. DESCRIPTIVE GEOMETRY. MacCord's Elements of Descriptive Geometry. Freshman, 1 hour, daily. 2d term. Mr. Gardner. Required in all engineering courses.

IV. DESCRIPTIVE GEOMETRY DRAWING. Construction of descriptive geometry problems. Parallel with course III. Freshman, 2 hours, three times per week. 2d term. Mr. Gardner. Required in all engineering courses.

Electrical Engineering.

I. PHYSICS. Statics, kinetics, electricity, and magnetism. Lectures and experimental demonstration. 1st term. Sophomore. Four days, with laboratory 2 hours per week. Required of all engineering students. Professors Blake and Dunstan.

II. PHYSICS. Sound, heat, and light. Lectures and experimental demonstration. 2d term. Sophomore. Four days, with laboratory 2 hours per week. Required of all engineering students. Professors Blake and Dunstan.

III. DYNAMO MACHINERY. Theory and design of direct-current generators and motors. 1st term, every day. Required of electrical and mechanical engineering students. Junior year. Mr. Rice.

IV. DYNAMO MACHINERY. Theory and general design of alternating-current generators and motors. Required of electrical engineering students. Junior year. 2d term. Four days.

V. DYNAMO MACHINERY. This course is a continuation of the preceding. Special attention given to polyphasal power transmission. Required of electrical engineering students, Senior year, four times per week. Professor Blake.

VI. LABORATORY. Required of electrical engineering students, 1st term, Junior year, two afternoons per week. Mr. Rice.

VII. LABORATORY. Measurement of electrolytic resistances. Required of electrical engineering students, 2d term, Junior year, two afternoons per week. Mr. Rice.

VIII. THERMODYNAMICS. Theory of gases, saturated and superheated vapors. Required of electrical and mechanical engineering students, 1st term, Senior year, four days per week. Professor Dunstan.

IX. THEORY OF ELECTRICITY AND MAGNETISM. Required of electrical engineering students, 1st term, Senior year, twice a week. Professor Dunstan.

X. THEORY OF ELECTRICITY AND MAGNETISM. Course IX continued. Required of electrical engineering students, 2d term, Senior year, three days per week. Professor Dunstan.

XI. LABORATORY. Experimental study of the transformer. Required of electrical engineering students, 2d term, Senior year.

XII. SPECIAL TECHNICAL TOPICS. These are intended to present commercial practice in higher railway and power transmission.

Physical Geology and Mineralogy.

I. MINERALOGY AND PETROGRAPHY. Crystallography, blowpipe analysis, and the study of building stone. Required of mining engineering students, Sophomore year, two days per week during 1st term and three days during 2d term. Professor Haworth.

IV. PETROGRAPHY. Senior year. 2d term (α). Daily. Required of mining engineering students. Professor Haworth.

V. ECONOMIC GEOLOGY. Junior year. 2d term (α). Daily. Required of mining, chemical and sanitary engineering students. Professor Haworth.

VI. ECONOMIC GEOLOGY. Senior year. 1st term. Daily. Required of mining engineering students. Professor Haworth.

X. DYNAMIC GEOLOGY. Senior year. 1st term. Daily. Required of mining engineering students. Professor Haworth.

XI. MINERALOGY AND PHYSIOGRAPHY. Junior year. 1st term. Daily. Required of civil, chemical and sanitary engineering students. Professor Haworth.

Language.

B I. RHETORIC. Genung's Outlines. Composition and lectures on the history of the English language. Required of all Freshmen engineering students. 1st term. Daily. Mr. Jones and Mr. O'Leary.

B VI. ADVANCED ENGLISH COMPOSITION. This course is designed to cultivate the rapid and accurate use of written English. For electrical, mechanical and mining engineering students, twice a week during the 1st term of Junior year. For civil and chemical engineering students, three days a week during the 2d term of Senior year. Professor Hopkins and Mr. O'Leary.

C. SCIENTIFIC GERMAN. The one-term course in German for scientific students follows a high-school course of one year, or German I, in the University. It consists of reading, both at sight and with translation, of scientific prose, using at first a reader and after that separate treatises, so far as possible in the line of the student's specialties. The aim of the course is to familiarize the students with scientific style and vocabulary and prepare them for using the language as an aid in their advanced studies. Required of all engineering students. Daily. 2d term. Freshman. Mr. Engel.

D. SCIENTIFIC FRENCH. This course aims to introduce the student to a general scientific vocabulary, to cultivate the power of getting rapidly at the contents of a French text, and especially to

train him to habits of accuracy in his reading. Some 300 or 400 pages, mainly of scientific description and explanation in various fields, are read. At present Herdler's Scientific French Reader and Luquien's French Prose of Popular Science furnish most of the material. Required of all engineering students except those in mining. Daily. 1st term. Freshman.

III. KARL DER GROSSE, DIE JOURNALISTEN, BURG NEIDECK. Required of mining engineering students. Daily. 1st term. Freshman. Mr. Engel.

Mathematics and Astronomy.

I. ALGEBRA. (a) Theory of series, logarithms, partial fractions, etc. PLANE TRIGONOMETRY. (b) Trigonometric functions and solution of plane triangles. Required of all Freshmen. Daily. 1st term. Professor Miller, Professor Newson, and Mr. Rice.

III. ANALYTICAL GEOMETRY. Rectangular and polar coördinates. Applications to the straight line, circle and conic sections. Required of all Sophomore engineering students. Daily. 1st term. Professor Newson.

IV. CALCULUS, differential and integral, with applications. Required of all Sophomore engineering students. Daily. 2d term. Professor Miller.

VIII. DIFFERENTIAL EQUATIONS. Theory and applications to problems in mechanics, physics, direct and alternating currents, etc. Required of electrical and mechanical engineering students. Three hours per week. 1st term. Junior. Mr. Rice.

X. PRACTICAL ASTRONOMY. Instruments, geodetic measurements, sun's motion, time, latitude and longitude, moon's motion, eclipses and occultations, solar system, gravitation, tides, precession and nutation, planetary perturbations. Required of civil engineering students. Daily. 2d term. Junior. Professor Miller.

Mechanical Engineering.

Drawing.

I. MACHINE DRAWING. Free-hand working sketches of machine parts and assembled machines. Working drawings from these sketches in accordance with approved practice. Detailing from assembly drawings. Tracing and blue printing. Drawing office systems. Sophomore, 2 hours, three times per week, 1st term. Professor Palmer and Mr. Gardner. Required in the electrical and mechanical engineering courses.

II. MACHINE DESIGNING. Elements of machine designing. Designing of machine details. Designing of simple machines, involving the relating and proportioning of parts. To be taken only with me-

chanical engineering III. Sophomore, 2 hours, three times per week, 2d term. Professor Palmer and Mr. Gardner. Required in the electrical and mechanical engineering courses.

Mechanical Engineering.

III. MACHINE DESIGN. Lectures and notes. Rules, formulæ and data for the design of machine elements. Proportioning of machine parts in accordance with approved practice. Problem work to be carried out in course II. Sophomore, 1 hour, twice a week. 2d term. Professor Palmer. Required in electrical and mechanical engineering courses.

IV. PRINCIPLES OF MECHANISM. The kinematics of machinery. Robinson's Principles of Mechanism. Reference to Reuleaux. Sophomore, 1 hour, three times per week. 2d term. Professor Palmer. Required in the electrical and mechanical engineering courses.

V. INVENTIONAL DESIGNING. Devising of mechanisms to meet given requirements. Production of machines to perform specific operations. Simple and effective arrangement of parts. Proportioning of parts and making of necessary drawings. Senior, 2 hours, twice a week. 1st term. Professor Palmer. Required in the mechanical engineering course.

VI. ENGINES AND BOILERS. Classification of engines and study of types. Engine accessories. Valves and valve gearing. Governors for steam-engines. Engine foundations. Engine connections. The steam-boiler. General construction. Types. Boiler setting. Study of fuels and combustion. Boiler appliances. Care and management of boilers. Inspecting and testing. Efficiency tests of power plants. Locations and plans for power plants. Based on Hutton's Mechanical Engineering of Power Plants. Junior, 1 hour daily. 2d term. Professor Palmer. Required in electrical, mechanical and mining engineering courses.

VII. ENGINE AND BOILER DESIGNING. Designing of engine details. Complete design for a steam-engine. Designing of boilers, boiler settings, and furnaces. Rules, formulæ, and approved practice. Senior. Two hours, twice a week. 2d term. Professor Palmer. Required in the mechanical engineering course.

VIII. LOCOMOTIVE MACHINERY. Study of the locomotive. Locomotive construction, management, and design. Senior. One hour, twice a week. 2d term. Professor Palmer. Required in the mechanical engineering course.

IX. GAS, GASOLINE AND OIL ENGINES. Study of types of explosion engines. Engine details. Engine running and testing. Senior, 1 hour, twice a week. 1st half 2d term. Professor Palmer. Required in the mechanical and electrical courses.

X. COMPRESSED AIR. Theory and practice of air compression. Applications of compressed air. Compressed-air-driven tools and appliances. Senior. One hour twice a week. 2d half 2d term. Professor Palmer. Required in the mechanical engineering course.

XI. HYDRAULIC MACHINERY. Study of hydraulic engines, water-wheels, turbines and impulse wheels, pumps and rams, elevator machinery, and special applications of hydraulic power. Senior. One hour, four times per week. Last half 1st term. Professor Palmer. Required in the civil and mechanical engineering courses.

XII. MACHINERY AND MILL WORK. Study of machinery for manufacturing operations. Selection and arrangement of machinery for given conditions. Shop plans. Study of the organization and management of industrial establishments. Senior. One hour daily. 1st half 2d term. Professor Palmer. Required in the mechanical engineering course.

XIII. MECHANICAL METHODS AND PRACTICE. Lectures and notes on points of practice in connection with the use of tools; setting, adjustment and care of machines, shafting and belting, valve setting, etc. Junior. One hour, three times a week. 2d term. Professor Ward. Required in mechanical and electrical courses.

XIV. HEATING SYSTEMS. Principles of heating and ventilation. Study of plans for heating and ventilating buildings. Selection and operation of machinery for the purpose. Junior. One hour, twice a week. 2d term. Professor ———. Required in mechanical engineering course.

XV. THESIS WORK. Each candidate for graduation will carry out systematic original work, either in experimentation or engineering designing. Senior. Four hours, once a week throughout the year. Professor Palmer.

Experimental Engineering.

XVI. ADJUSTMENT OF ENGINEERING INSTRUMENTS. Calibration of instruments. General laboratory practice. Dynamometers and power measurements. Junior. Four hours, once a week. 1st term. Professor Palmer and Mr. Gardner. Required in mechanical engineering course.

XVII. STEAM ENGINEERING. Indicator Practice. Calorimetry. Engine and boiler trials. Practice in running of engines and management of boilers. Senior. Four hours, once a week. 2d term. Professor Palmer and Mr. Gardner. Required in mechanical engineering course.

Mining Engineering.

I. BORING, MINING, BLASTING, SHAFTING, TUNNELING, AND MINE SUPPORTS. Boring: Methods and appliances for prospect drilling and for drilling oil wells and gas wells, including different varieties of tools and machinery employed, difficulties to be encountered, and

conditions under which prospect boring or drilling is profitable. **Excavation:** Excavation of various kinds of earth, such as soils, clays, sands, and rocks, with or without ground water; quarrying stone, etc., with various kinds of tools and machinery employed for same. **Blasting:** A study of the various kinds of explosives used in mining and excavating, such as black powder and the various kinds of the nitroglycerins and other explosives, including their manufacture and modes of use, and precautions necessary in handling them. **Shafting:** Shaft sinking. Methods employed in sinking shafts through soft and hard materials, dry or water-bearing, including the hoisting and handling of excavated material, and methods of shaft-timbering and shaft-lining. **Tunneling:** Methods of driving tunnels through different kinds of earth and rock, including drainage and ventilation, tunnel supports and linings, and methods of choosing locations for tunnels. **Mine supports:** Including a general study of the various methods of supporting all forms of underground openings by timbers, masonry, metallic linings, and other methods peculiarly adaptable to special conditions. Required of mining engineering students. Junior year. 1st term. Every day, by appointment.

II. MINE ENGINEERING, MINE SURVEYING, AND MINING METHODS. **Mine engineering:** Extraction, drainage and ventilation. **Extraction:** Machinery and methods used in handling and separating mining materials on the surface and under ground, tramways, cars, propelling forces, methods of loading and unloading carriages, methods of storing the mining products. **Drainage:** Sources, amount and character of mine waters, and methods for controlling the same, mine drainage by natural and artificial methods, water-supply, inundations, and modes of escape from inundated mines. **Ventilation:** Air of mines, underground gases and gases produced by blasting and other mining operations, methods of ventilation, mine explosions of fire-damp and dust, mine fires, relief and rescue in case of accident. **Mine surveying:** General principles of underground surveying and relation between underground and surface surveys, the construction of mine maps and mine sections, and measurements required in connection with contracts and location of new works. To be supplemented by field work during summer vacation. A mining engineering study. Junior year. 2d term. Optional for mining engineering students with resistance of materials. Every day, by appointment.

III. ORE DRESSING. General methods and theories for separating different ores from foreign materials and for washing coal, clays, and other products. It includes a study of hand dressing, crushing, screening, and jigging, and a study of the machinery for the same, the concentration of slimes, milling methods for gold and silver ores. To be preceded by examination of ore-dressing plants during the summer vacation excursion. Required of mining en-

gineering students. Senior year. 1st term. Every day, by appointment.

IV. MINE EXPLOITATION AND DEVELOPMENT. A study of the nature and origin of matalliferous deposits and other valuable mining materials, the best methods of prospecting and developing mining properties by drill holes, surface cuttings, shafting, tunneling, and drifting, examination and reports on mining properties. Required of mining engineering students. Senior year. Must be preceded by geology VI. 2d term (*a*). Every day, by appointment. Professor Haworth.

V. MINING PLANT. A study of the various kinds of machinery employed in mine development and mine operation, and methods of placing the same; including machinery required for drilling, blasting, hoisting, drainage, and mine ventilation; and for ore dressing, including crushers, screens, jigs, stamping mills, and other machinery connected with mine development and mine operation; also the buildings required for housing and protecting the different kinds of machinery. Required of mining engineering students. Senior year. 2d term. Every day, by appointment.

VI. PROFESSIONAL THESIS. Before graduation a thesis will be required of each student, embodying an elaborate description of some phase of mining or mining plant; or a description of the mineralogy or geology of some mining locality. It is presumed that material will largely be gathered for thesis work during the summer vacation excursions, but ideal plants may be constructed or mines developed in exceptional cases. In a general way the thesis work will be under the supervision of the department of geology and mining, but not necessarily so in detail. It should be begun during the first term of the Senior year. A typewritten copy of the thesis must be presented to the head of the department of geology and mining not later than June 1, and must be approved by the head of the department and the Dean of the Engineering School before graduation.

VII. SUMMER EXCURSION WORK. During the summer vacation between the Junior and Senior years students will be required to devote about six weeks to a study of some of the more important mining localities of America. Excursions will be arranged by the heads of the departments interested and students will be accompanied by different instructors, so that a careful study may be made of the geology and mineralogy of the region, of the mines and mining methods, and of the plants for mining, ore dressing, and smelting. It is expected that this work will be exceedingly beneficial to the student. It will, therefore, be passed upon and graded the same as other studies in the course.

Course in Civil Engineering.**FRESHMAN YEAR.****First Term:**

Scientific French, (Language *D*,) every day, at 11.

Algebra (*a*) and Plane Trigonometry (*b*), (Mathematics I,) every day at 8, 9, 10, or 11. Professor Miller, Professor Newson, and Mr. Rice.

English, (Language *B* I,) every day, at 9 or 11. Mr. Jones and assistant.

Free-hand Drawing, (Drawing II,) Monday or Thursday, 1 to 3. Mr. Gardner.

Geometrical Drawing, (Drawing I,) Tuesday, Wednesday, and Friday, two days required, 1 to 3. Mr. Gardner.

Physical culture.

Second Term:

Chemistry I, every day, at 8 or 10. Professor Bailey.

Scientific German, (Language *C*,) every day, at 8. Mr. Engel.

Descriptive Geometry, (Drawing III,) every day, at 8 or 9. Mr. Gardner.

Drawing IV, Monday, Wednesday, and Friday, 1 to 3. Mr. Gardner.

Physical culture.

Surveying, (Civil Engineering XXI.) Professor Marvin and Mr. Searcy.

SOPHOMORE YEAR.**First Term:**

Physics, (Electrical Engineering I,) four days per week, at 11. Professor Blake.

Physical Laboratory, (Electrical Engineering I,) Tuesday or Thursday, 1 to 3.

Qualitative Analysis, (Chemistry II,) every day, 9 to 11. Professor Bailey and Mr. ———

Analytical Geometry, (Mathematics III,) every day, at 8. Professor Newson.

Shades, Shadows, and Perspective, (Civil Engineering XVII,) Monday, Wednesday and Friday, 1 to 3. Mr. Searcy.

Physical culture.

Three themes.

Second Term:

Physics, (Electrical Engineering II,) four days per week, at 11. Professor Blake.

Physical Laboratory, (Electrical Engineering II,) Tuesday or Thursday, 1 to 3.

Calculus, (Mathematics IV,) every day at 8. Professor Miller.

Surveying, (Civil Engineering VIII,) every day, at 10. Mr. Searcy.

Topographical Drawing, (Civil Engineering XVIII,) Monday and Wednesday, 1 to 3. Mr. Searcy.

Physical culture.

Three themes.

Surveying, (Civil Engineering XXI.) Professor Marvin and Mr. Searcy.

JUNIOR YEAR.

First Term:

Mechanics, (Civil Engineering I,) every day, at 11. Professor Marvin.

Mineralogy, (Geology XI,) every day, 9 to 11. Professor Hawthorth.

Railway Surveying, (Civil Engineering IX,) every day, at 8. Mr. Searcy.

Railway Drawing, (Civil Engineering XIX,) Monday and Wednesday, 1 to 3. Mr. Searcy.

Two forensics, or equivalent theses.

Second Term:

Strength of Materials, (Civil Engineering II,) four days per week, at 10. Professor Marvin.

Practical Astronomy, (Mathematics X,) every day, at 11. Professor Miller.

Location of Railroads, (Civil Engineering X,) three-fifths term (a), every day, at 9. Mr. Searcy.

Roads and Pavements, (Civil Engineering XI,) two-fifths term (b), every day, at 9. Mr. Searcy.

Testing Laboratory, (Civil Engineering III,) Tuesday or Thursday, 1 to 5. Professor Palmer and Mr. Gardner.

Graphical Statics, (Civil Engineering XX,) Monday and Wednesday, 1 to 3. Mr. Searcy.

Two forensics, or equivalent theses.

Surveying, (Civil Engineering XXI.) Professor Marvin, and Mr. Searcy.

SENIOR YEAR.

First Term:

Hydraulics (a), (Civil Engineering IV,) every day, at 10. Professor Marvin.

Hydraulic Machinery (b), (Mechanical Engineering XI,) every day, at 10. Professor Palmer.

Roofs and Bridges, (Civil Engineering VI,) every day, 1 to 3. Professor Marvin.

Masonry (b), (Civil Engineering XIV,) every day, at 9. Mr. Searcy.

Sewerage (a), (Civil Engineering XII,) every day, at 9. Mr. Searcy.

Testing Laboratory, (Civil Engineering XV,) Monday and Wednesday, 3 to 5. Mr. Gardner.

Two forensics, or equivalent theses.

Second Term :

Bridge Designing, (Civil Engineering VII,) every day, 1 to 3.
Professor Marvin.

Advanced English Composition, (Language B VI,) Monday,
Wednesday, and Friday, at 9. Professor Hopkins and
Mr. O'Leary.

Water-Supply (a), (Civil Engineering XIII,) every day, at 11.
Mr. Searcy.

Specifications and Contracts (b), (Civil Engineering XVI,) every
day, at 11. Professor Marvin.

Professional thesis.

NOTE.—Students wishing to specialize along the line of hydraulic and sanitary engineering can substitute courses in economic geology, bacteriology, water analysis, irrigation and additional sanitary work for the required astronomy, roofs and bridges, bridge design, and railway location.

Course in Electrical Engineering.

FRESHMAN YEAR.

First Term :

Algebra (a) and Plane Trigonometry (b), (Mathematics I,) every
day, at 8, 9, 10, and 11. Professor Miller, Professor Newson,
and Mr. Rice.

English, (Language B I,) every day, at 8 or 11. Mr. Jones and
assistant.

Scientific French, (Language D,) every day, at 11.

Free-hand Drawing, (Drawing II,) Monday or Thursday, 1 to 3.
Mr. Gardner.

Geometrical Drawing and Lettering, (Drawing I,) two afternoons
per week, Tuesday, Wednesday, or Friday, 1 to 3. Mr. Gard-
ner.

Shop practice, one-half day per week.

Second Term :

General Chemistry I, every day, at 8 or 10. Professor Bailey.

Descriptive Geometry, (Drawing III,) every day, at 8 or 9. Mr.
Gardner.

Scientific German, (Language C,) every day, at 8. Mr. Engel.

Descriptive Geometry—Plates, (Drawing IV,) Monday, Wednes-
day, and Friday, 1 to 3. Mr. Gardner.

Shop practice, one afternoon per week, 1 to 6.

SOPHOMORE YEAR.

First Term :

Physics, (Electrical Engineering I.) Lectures four days per week,
at 11, and laboratory practice one afternoon per week, from 1 to
3. Professors Blake and Dunstan.

Analytical Geometry, (Mathematics III,) every day, at 8. Pro-
fessor Newson.

Qualitative Analysis, Chemistry II, every day, 9 to 11. Profes-
sor Bailey and ———.

Machine Drawing, (Mechanical Engineering I,) three afternoons per week, Monday, Wednesday, and Friday, 3 to 5. Professor Palmer and Mr. Gardner.

Shop practice, one afternoon per week, 1 to 6.

Three themes.

Second Term :

Calculus, (Mathematics IV,) every day, at 8. Professor Miller.

Physics, (Electrical Engineering II,) lectures four days per week, at 11, and laboratory practice one afternoon per week, from 1 to 3. Professors Blake and Dunstan.

Principles of Mechanism, (Mechanical Engineering IV,) Monday, Wednesday, and Friday, at 10. Professor Palmer.

Machine Design—Lectures, (Mechanical Engineering III,) Tuesday and Thursday, at 10. Professor Palmer.

Machine Designing, (Mechanical Engineering II,) Monday, Wednesday and Friday, 3 to 5. Professor Palmer and Mr. Gardner.

Shop practice, one afternoon, Tuesday or Thursday, 1 to 6.

Three themes.

JUNIOR YEAR.

First Term :

Analytical Mechanics, (Civil Engineering I,) every day, at 11. Professor Marvin.

Dynamo Machinery, (Electrical Engineering III,) every day, at 10. Mr. Rice.

Differential Equations, (Mathematics VIII,) Monday, Wednesday, and Friday, at 9. Mr. Rice.

Advanced English Composition, (Language B VI,) Tuesday and Thursday, 8 to 10. Professor Hopkins.

Laboratory, (Electrical Engineering VI,) two afternoons per week, 2 to 5.

Shop practice, one afternoon per week, 1 to 6.

Electrical Seminary, once a week.

Second Term :

Resistance of Materials, (Civil Engineering II,) four days per week, at 10. Professor Marvin.

Engines and Boilers, (Mechanical Engineering VI,) daily, at 11. Professor Palmer.

Dynamo Machinery, (Electrical Engineering IV,) four days per week, at 1. Professor Blake.

Engineering Laboratory, (Civil Engineering III,) Tuesday or Thursday, 2 hours. Professor Palmer and Mr. Gardner.

Laboratory, (Electrical Engineering VII,) two afternoons per week, 2 to 5. Mr. Rice.

Two forensics or equivalent theses.

Shop practice, one afternoon per week, 1 to 6.

Electrical seminary, once a week.

One week in the boiler-room and one week in the engine-room required of each student during the term.

SENIOR YEAR.

First Term:

Thermodynamics, (Electrical Engineering VIII,) Monday, Tuesday, Wednesday, and Friday, at 11. Professor Dunstan.

Dynamo Machinery, (Electrical Engineering V,) four days per week, at 1. Professor Blake.

Chemistry of the Metals (*a*), (Chemistry VIII,) every day, at 8. Professor Franklin.

Chemical Physics (*b*), (Chemistry VIII,) every day, at 8. Professor Franklin.

Theory of Electricity and Magnetism, (Electrical Engineering IX,) Tuesday and Thursday, at 9. Professor Dunstan.

Laboratory Work, (Electrical Engineering XI,) experimental study of the transformer, two afternoons per week, 2 to 5.

Thesis, Friday, 1 to 5.

Two forensics, or equivalent theses.

Electrical Seminary, once a week.

Second Term:

Engineering Laboratory—Steam Engineering, (Mechanical Engineering XVII,) Tuesday or Thursday, 1 to 5. Professor Palmer and Mr. Gardner.

Special Technical Topics, (Electrical Engineering XII,) daily, at 10. Professors Blake and Dunstan.

Mechanical Methods and Practice, (Mechanical Engineering XIII,) Monday, Wednesday, and Friday, at 9. Professor Ward.

Gas, Gasoline and Oil Engines (*a*), (Mechanical Engineering IX,) Tuesday and Thursday, at 9. Professor Palmer.

Specifications and Contracts, (Civil Engineering XVI,) daily, at 11 (*b*). Professor Marvin.

Theory of Electricity and Magnetism, (Electrical Engineering X,) (*a*) Tuesday, Wednesday, Thursday, and Friday, at 11; Tuesday and Thursday (*b*). Professor Dunstan.

Thesis, two afternoons, 2 to 5.

Electrical Seminary.

Course in Chemical Engineering.

In the Freshman year the course is the same as the civil engineering, except that summer field practice is not required of the chemical engineers.

SOPHOMORE YEAR.

First Term:

Analytical Geometry, (Mathematics III,) every day, at 8. Professor Newson.

Physics, (Electrical Engineering I,) four days a week, at 11.

Laboratory practice, one afternoon per week. Professor Blake.

Qualitative Analysis, (Chemistry V,) every day, 9 to 11. Professor Bailey and Professor Bartow.

Physical culture.

Three themes.

Second Term :

Botany I, every day, 9 to 11. Professor Stevens and Professor Barber.

Physics, (Electrical Engineering I,) four days per week, at 11.

Laboratory practice, one afternoon a week. Professor Blake.

Calculus, (Mathematics IV,) every day, at 8. Professor Miller.

Physical culture.

Three themes.

JUNIOR YEAR.

First Term :

Quantitative Analysis, (Chemistry VI,) every day, 2 to 5. Professor Bailey.

Mineralogy and Physiography, (Geology XI,) every day, 9 to 11. Professor Haworth.

Analytical Mechanics, (Civil Engineering I,) every day, at 11. Professor Marvin.

Chemical Seminary, every Thursday, at 4.

Two forensics, or equivalent themes.

Second Term :

Economic Geology, (a) (Geology V,) every day, at 11. Professor Haworth.

Inorganic Preparations (b), (Chemistry XVIII,) every day, 8 to 10. Professor Franklin.

Organic Chemistry, (Chemistry IX,) Monday, Wednesday, and Friday, 1 to 3, with laboratory practice on Tuesday and Thursday. Professor Franklin.

Metallurgy, (Chemistry XIX,) daily. Professor Bailey.

Resistance of Materials, (Civil Engineering II,) four days a week, at 10. Professor Marvin.

Testing Laboratory, (Civil Engineering III,) one afternoon a week, Tuesday or Thursday, 1 to 5. Professor Palmer and Mr. Gardner.

Chemical Seminary, every Thursday, at 4.

Two forensics, or equivalent theses.

SENIOR YEAR.

First Term :

Metallurgy, (Chemistry XX,) every day, at 11. Professor Bailey.

Chemical Technology (a), (Chemistry XVIII,) every day, at 10. Professor Bailey.

Sanitary and Applied Chemistry, (Chemistry XIII,) by appointment. Professor Bailey.

Optionals, (Chemistry XIV, XV.) Either sugar analysis, gas analysis, iron and steel analysis, or organic preparations.

Every day, by appointment. Professors Bailey and Franklin.

Chemical Seminary, every Thursday, at 4.

Two forensics, or equivalent theses.

Second Term :

- Advanced English Composition, (English *B* VI,) every day, at 9. Professor Hopkins and Mr. Jones.
 Analysis of Soils, Fertilizers, Waters, and Foods, every afternoon. Professor Bailey.
 Assaying (*b*), (Chemistry XI,) every day, from 10 to 12. Professor Franklin.
 Preparation of thesis (*b*).
 Chemical Seminary, every Thursday, at 4.

Course in Mechanical Engineering.

FRESHMAN YEAR.

First Term :

- Algebra (*a*), Plane Trigonometry (*b*), (Mathematics I,) daily, at 8, 9, 10, or 11. Professor Miller, Professor Newson, and Mr. Rice.
 English, (Language *B* I,) daily, at 8 or 11. Mr. Jones and Mr. O'Leary.
 Scientific French, (Language *B*), daily, at 11.
 Geometrical Drawing and Lettering, (Drawing I,) Tuesday, Wednesday, and Friday. Two days required. From 1 to 3. Mr. Gardner.
 Free-hand Drawing, (Drawing II,) Monday or Thursday. One day required. From 1 to 3. Mr. Gardner.
 Shop work, one afternoon, 1 to 6.

Second Term :

- General Chemistry I, daily, at 8 or 10. Professor Bailey.
 Scientific German, (Language *C*), daily, at 8. Mr. Engel.
 Descriptive Geometry, (Drawing III,) daily, at 8 or 9. Mr. Gardner.
 Descriptive Geometry—Plates, (Drawing IV,) Monday, Wednesday, and Friday, 1 to 3. Mr. Gardner.
 Shop work, one afternoon, Tuesday or Thursday, 1 to 6.

SOPHOMORE YEAR.

First Term :

- Physics, (Electrical Engineering I,) four days per week, at 11. Professor Blake.
 Physical Laboratory, (Electrical Engineering I,) Tuesday or Thursday, 1 to 3. Professor Blake and Professor Dunstan.
 Analytical Geometry, (Mathematics III,) daily, at 8. Professor Newson.
 Qualitative Analysis, (Chemistry II,) daily, at 9 to 11. Professor Bailey.
 Machine Drawing, (Mechanical Engineering I,) Monday, Wednesday, and Friday, 3 to 5. Professor Palmer and Mr. Gardner.
 Shop work, one afternoon, Tuesday or Thursday, 1 to 6.
 Three themes.

Second Term :

Physics, (Electrical Engineering II,) four days, at 11. Professor Blake.

Physics Laboratory, (Electrical Engineering II,) Tuesday or Thursday, 1 to 3. Professor Blake and Professor Dunstan.

Calculus, (Mathematics IV,) daily, at 8. Professor Miller.

Principles of Mechanism, (Mechanical Engineering IV,) Monday, Wednesday, and Friday, at 10. Professor Palmer.

Machine Design Lectures, (Mechanical Engineering III,) Tuesday and Thursday, at 10. Professor Palmer.

Machine Designing, (Mechanical Engineering II,) Monday, Wednesday, and Friday, 3 to 5. Professor Palmer and Mr. Gardner.

Shop work, one afternoon, Tuesday or Thursday, 1 to 6.

Three themes.

JUNIOR YEAR.

First Term :

Analytical Mechanics, (Civil Engineering I,) daily, at 11. Professor Marvin.

Dynamo Machinery, (Electrical Engineering III,) daily, at 10. Mr. Rice.

Differential Equations, (Mathematics VIII,) Monday, Wednesday, and Friday, at 9. Mr. Rice.

Advanced English Composition, (Language B VI,) Tuesday and Thursday, 8 to 10. Professor Hopkins and Mr. O'Leary.

Engineering Laboratory, (Mechanical Engineering XVI,) Tuesday and Thursday, 1 to 5. Professor Palmer and Mr. Gardner.

Shop work, one afternoon, 1 to 6.

Second Term :

Resistance of Materials, (Civil Engineering II,) Tuesday, Wednesday, Thursday, and Friday, at 10. Professor Marvin.

Engines and Boilers, (Mechanical Engineering VI,) daily, at 11. Professor Palmer.

Mechanical Methods and Practice, (Mechanical Engineering XIII,) Monday, Wednesday, and Friday, at 9. Professor Ward.

Heating Systems, (Mechanical Engineering XIV,) Tuesday and Thursday, at 9. Professor ———.

Engineering Laboratory, (Civil Engineering III,) Tuesday and Thursday, 1 to 5. Professor Palmer and Mr. Gardner.

Shop work, one afternoon, 1 to 6.

One week in boiler-room and one week in the engine-room required of each student during the term.

SENIOR YEAR.

First Term :

Mechanics of Fluids (*a*), (Civil Engineering IV,) Hydraulic Machinery (*b*), (Mechanical Engineering XI,) Monday, Tuesday, Wednesday, and Thursday, at 10. Professor Marvin and Professor Palmer.

Hydraulic Laboratory, (Civil Engineering V,) Tuesday and Thursday, 3 to 5. Professor Palmer and Mr. Gardner.

Thermodynamics, (Electrical Engineering VIII,) four days, Monday, Tuesday, Wednesday, and Friday, at 11. Professor Dunstan.

Design of Framed Structures, (Civil Engineering VI,) daily, 1 to 3. Professor Marvin.

Inventional Designing, (Mechanical Engineering V,) Monday and Wednesday. Professor Palmer.

Thesis Work, (Mechanical Engineering XV,) Friday, 1 to 5.

Second Term :

Machinery and Mill Work (*a*), (Mechanical Engineering XII,) Specifications and Contracts (*b*), (Civil Engineering XVI.) (*a*) at —, daily; (*b*) at 11, daily. Professor Palmer and Professor Marvin.

Metallurgy, (Chemistry XIX,) daily, at 10. Professor Bailey.

Locomotive Machinery, (Mechanical Engineering VIII,) Wednesday and Friday, at 9. Professor Palmer.

Gas, Gasoline and Oil Engines (*a*), Compressed Air (*b*), (Mechanical Engineering IX and X,) Tuesday and Thursday, at 9. Professor Palmer.

Engine and Boiler Designing, (Mechanical Engineering VII,) Monday and Wednesday, 1 to 3. Professor Palmer.

Engineering Laboratory—Steam Engineering, (Mechanical Engineering XVII,) Tuesday and Thursday, 1 to 3. Professor Palmer and Mr. Gardner.

Thesis Work, (Mechanical Engineering XV,) Friday, 1 to 5.

Course in Mining Engineering.

FRESHMAN YEAR.

First Term :

Algebra (*a*) and Plane Trigonometry (*b*), (Mathematics I,) every day, at 8, 9, 10, or 11. Professor Miller, Professor Newson, and Mr. Rice.

English, (Language *B* I,) every day, at 8 or 11. Mr. Jones and assistant.

German, (Language III,) every day, at 8 or 9. Mr. Engel and Miss Parrott.

Drawing I—Geometrical Drawing and Lettering, two days, Tuesday, Wednesday, or Friday, 1 to 3. Mr. Gardner.

Drawing II—Free-hand, one day, Monday or Thursday, 1 to 3. Mr. Gardner.

Shop work, one afternoon per week, 1 to 6.

Mining Journal Meeting, one hour per week.

Second Term :

Scientific German (Language *C*), every day, at 8. Mr. Engel.

Qualitative Analysis, (Chemistry II,) every day, lectures and laboratory work, ten hours per week. Professor Bailey.

Descriptive Geometry, (Drawing III,) every day, at 8 or 9. Mr. Gardner.

Drawing IV—Geometrical Plates, Monday, Wednesday, and Friday, 1 to 3. Mr. Gardner.

Shop work, one afternoon per week, 1 to 6.

Mining Journal Meeting, one hour per week.

Summer Vacation:

Surveying (Civil Engineering XXI,) four weeks. Professor Marvin and assistant.

SOPHOMORE YEAR.

First Term:

Analytical Geometry, (Mathematics III,) every day, at 8. Professor Newson.

Physics, (Electrical Engineering I,) Monday, Tuesday, Wednesday, and Thursday, at 11. Professor Blake.

Physical Laboratory, (Electrical Engineering I,) Tuesday or Thursday, 1 to 3. Professor Blake and Professor Dunstan.

Quantitative Analysis, (Chemistry VI,) laboratory work every day, ten hours per week. Professor Bailey.

Mineralogy, (Geology I,) lectures and laboratory work, Tuesday and Thursday, 9 to 11. Professor Haworth.

Machine Drawing, (Mechanical Engineering I,) Monday, Wednesday, and Friday, 3 to 5. Professor Palmer and Mr. Gardner.

Three themes.

Mining Journal Meeting, one hour per week.

Second Term:

Calculus, (Mathematics IV,) every day, at 8. Professor Miller.

Surveying, (Civil Engineering VIII,) every day, at 10. Mr. Searcy.

Physics, (Electrical Engineering II,) Monday, Tuesday, Wednesday, and Thursday, at 11. Professor Blake.

Physical Laboratory, (Electrical Engineering II,) Tuesday or Thursday, 1 to 3. Professor Blake and Professor Dunstan.

Mineralogy, (Geology I,) lectures and laboratory work, Monday, Wednesday, and Friday, 9 to 11. Professor Haworth.

Drawing, Topographical, (Civil Engineering XVIII,) Monday and Wednesday, 1 to 3. Mr. Searcy.

Mining Journal Meeting, one hour per week.

Summer Vacation:

Surveying (Civil Engineering XXI,) four weeks. Professor Marvin and assistant.

JUNIOR YEAR.

First Term:

Inorganic Chemistry VIII, every day, at 8. Professor Franklin.

Advanced English Composition, (English B VI,) Tuesday and Thursday, 8 to 10. Professor Hopkins and Mr. O'Leary.

Analytical Mechanics, (Civil Engineering I,) every day, at 11. Professor Marvin.

Mining I, every day, by appointment.

Shop work, one afternoon per week, 1 to 6.

Mining Journal Meeting, one hour per week.

Second Term :

Resistance of Materials, (Civil Engineering II,) Monday, Tuesday, Wednesday, and Thursday, at 10. Professor Marvin.

Engineering Laboratory, (Civil Engineering III,) one day per week, Tuesday or Thursday, 1 to 3. Professor Palmer and Mr. Gardner; or,

Mining II, every day, by appointment.

Engines and Boilers, (Mechanical Engineering VI,) Monday, Tuesday, Wednesday, and Thursday, at 11. Professor Palmer.

Metallurgy, (Chemistry XIX,) every day, by appointment. Professor Bailey.

Geology V (a), every day, at 3. Professor Haworth.

Assaying (b), (Chemistry XI,) every day, by appointment. Professor Franklin.

Engineering Laboratory, (Mechanical Engineering XVII,) one afternoon, two hours, Tuesday or Thursday, by appointment. Professor Palmer.

Two forensics.

Mining Journal Meeting, one hour per week.

Summer Vacation :

Summer Excursion Work, (Mining VII,) six weeks. Professor Haworth and assistant.

SENIOR YEAR.

First Term :

Hydraulics (a), (Civil Engineering IV,) Monday, Tuesday, Wednesday, and Thursday, at 10. Professor Marvin.

Hydraulic Machinery (b), (Mechanical Engineering XI,) Monday, Tuesday, Wednesday, and Thursday, at 10. Professor Palmer.

Hydraulic Laboratory, (Civil Engineering V,) Tuesday or Thursday, 1 to 5. Professor Palmer and Mr. Gardner.

Dynamic Geology X, every day, by appointment. Professor Haworth.

Mining III, every day, by appointment.

Economic Geology VI, lectures and library work, every day, at 3. Professor Haworth.

Two forensics.

Mining Journal Meeting, one hour per week.

Second Term :

Mining IV (a), every day, at 11. Professor Haworth.

Specifications and Contracts (b), (Civil Engineering XVI,) every day, at 11. Professor Marvin.

Mining IV, every day, by appointment.

Metallurgy, (Chemistry ———,) every day, by appointment. Professor Bailey.

Petrography (*a*), (Geology IV,) every day, by appointment. Professor Haworth.

Professional Thesis (*b*), (Mining VI.)

Mining Journal Meeting, one hour per week.

The Graduate School.

Faculty.

F. H. SNOW, *President*,
Botany and Entomology.

F. W. BLACKMAR, *Dean*,
History and Sociology.

E. MILLER,
Mathematics and Astronomy.

W. H. CARRUTH,
German.

F. O. MARVIN,
Civil Engineering.

E. H. S. BAILEY,
Chemistry and Metallurgy.

A. M. WILCOX,
Greek.

L. E. SAYRE,
Pharmacy.

A. G. CANFIELD,
French.

L. I. BLAKE,
Physics.

C. G. DUNLAP,
English.

G. B. PENNY,
Voice Training, Harmony, Musical Composition.

S. W. WILLISTON,
Historical Geology and Paleontology.

OLIN TEMPLIN,
Philosophy.

F. H. HODDER, *Secretary*,
American History and Administration.

E. M. HOPKINS,
English.

E. HAWORTH,
Physical Geology and Mineralogy.

A. T. WALKER,
Latin.

W. C. STEVENS,
Botany.

E. D. ADAMS,
European History.

A. S. OLIN,
Education.

E. C. FRANKLIN,
Chemistry.

H. B. NEWSON,
Mathematics.

S. J. HUNTER,
Entomology.

W. K. PALMER,
Mechanical Engineering.

The Graduate School.

The Graduate School provides for all instruction in advanced University studies, under the charge of the Graduate Faculty and its administrative committee, of which the Dean is chairman. It is the business of this Faculty to formulate courses in graduate work, to establish and maintain the requirements for all higher degrees offered by this University; to make recommendations for those de-

grees to the Board of Regents; and to fix such regulations as they may deem expedient for the government of the school.

Admission to the Graduate School ordinarily is granted to graduates of this University holding the bachelor's degree, and to graduates of other colleges and universities of good standing on presentation of proper evidence of scholarship and testimonials of good character. Applications for admission must be filed on the proper blanks in the office of the Dean of the school, and must be accompanied by an outline of the work proposed to be undertaken as approved by the heads of the departments concerned. Such applications will be received at any time, though it is recommended that work should begin at the beginning of the college year. Upon approval of the application by the administrative committee, a card will be issued to the applicant permitting him to register in the office of the Registrar.

Graduate students are classified as resident and non-resident, but admission to the Graduate School does not necessarily imply candidacy for a degree.

Resident students, whether candidates for a degree or not, must be in regular attendance on such course or courses as may have been selected and approved, and will be required to pass all examinations, or to submit to such other regulations and requirements as may be imposed by the heads of the departments concerned. Graduate students who pursue their work in part elsewhere must conform to the requirements imposed in each case by the administrative committee.

The University offers at present five advanced degrees, viz.: Doctor of philosophy, master of arts, master of science, civil engineer, and electrical engineer. The requirement of time named in each case is the minimum for baccalaureate graduates of this University and of other colleges and universities whose degrees are accepted by this University as equivalent to its own. All admitted with a standing inferior to this must spend such additional period of time to make good the deficiency as may be fixed by the administrative committee.

Degree of Ph. D.

The degree of doctor of philosophy will be granted on the ground of advanced scholarship and the performance of independent work in some special line, under the following conditions:

1. The candidate must be a baccalaureate graduate of this University or of a college or university whose degrees are accepted as equivalent to its own; or he must give satisfactory evidence to the Faculty of the Graduate School that he possesses an equivalent preparation for graduate work.

2. He must make application to the Dean of the Graduate School before the 1st day of October preceding the commencement at which he intends to present himself for the degree, and must then

give satisfactory evidence of his ability to read such German and French as may be necessary for the proper prosecution of his studies.

3. He must have spent at least three full college years in resident graduate work at this or some other approved university; the last year must be spent as a resident student of this University. The time spent in attaining the degree of A. M. may be counted toward satisfying this time condition.

4. He must present a thesis showing the results of original research of a high character, and must pass acceptable examinations, both written and oral, in one chief or major study and two allied, subsidiary or minor studies, not more than two of which may be in the same department. The oral examination shall be before the Faculty of the Graduate School, where he may be required to defend his thesis. The thesis, embodying the results of original research in some subject connected with his major study, must be presented to the head of the department in which the work was done not later than the 1st of May preceding the commencement at which the degree is to be conferred, and if approved by him shall be placed on file for inspection in the office of the Dean of the Graduate School for at least two weeks. If finally approved, not less than 100 printed copies must be delivered to the Librarian of the University before graduation, or proper security be given for the printing of that number; provided that, if the thesis has already been printed, ten copies only shall be deposited with the Librarian.

The Master's Degree.

The degree of master of arts or master of science will be granted only after at least one full year's graduate work. The candidate must have completed with high credit six full courses or their equivalent chosen from the courses of graduate study; other courses may be offered only by the special consent of the departments concerned and with the approval of the administrative committee; but courses for which a professional certificate or diploma is given will not be counted toward this degree. Work may be confined to a single department and may not be distributed among more than three. Not later than the 15th of May preceding the commencement at which the degree is to be taken, he must present to the head of the department in which his chief study has been a thesis which must embody some scholarly research on some topic connected with that study. Candidates for the master's degree may do *in absentia* half of the work required for that degree; provided, first, that the candidate be a graduate of the University of Kansas or of an institution regarded by the Administrative Committee as of equivalent rank; second, that the work done *in absentia* be approved in advance by the head of the department concerned; and, third, that the degree be not conferred upon any student who has not spent at least one term in residence at the University after receiving the bachelor's degree.

Engineering Degrees.

Graduates in engineering of this University, and masters of science who have received their degrees through the Graduate Faculty, are eligible to the professional degrees of civil engineer or electrical engineer, whichever is appropriate to the undergraduate course taken. Candidates for these degrees must have spent at least three years' actual time in professional practice, in positions of responsibility, in the design, construction or operation of engineering works, and must furnish detailed and satisfactory evidence as to the nature and extent of this practice.

They must submit an engineering thesis, accompanied by detailed explanations, drawings, specifications, estimates, etc., and embodying the results of their own work or observation. If approved, the thesis and all accompanying material shall be the property of the University.

All theses for any degree must be delivered to the Dean of the School of Engineering on or before the 15th day of May.

For further information, address the Registrar.

Courses of Graduate Study.

Courses marked with an asterisk are undergraduate courses, but somewhat more extended work is expected of the graduate students choosing them.

Botany and Entomology.

XI. Structure and Development of Cryptogams.—Bacteria or any group may be made a special study. By appointment, every day throughout the year. Professor Barber.

XII. Morphology and Physiology of the Plant Cell.—By appointment, every day throughout the year. Professor Stevens. Candidates for this course must be able to read French and German.

XIII. Ecology, the Relation of Plants to Environment.—Every day throughout the year. A part of this work may be done during the summer. Professor Stevens.

VI. Morphology and Taxonomy of Insects.—Students desiring to take this course must have completed courses I and II, or their equivalents. A thesis embodying results of investigations required at termination of work. Professor Hunter.

Zoölogy and Anatomy.

* IV. Histology, or Microscopic Anatomy.—Lectures and laboratory work. 2d term. Every day, from 3 to 5. Open to students who have taken course I, or comparative anatomy, course III. Piersol's Normal Histology. Mr. McClung.

* V. Cytology, or Cellular Biology.—Lectures and laboratory work. 2d term. By appointment. Open to students who have taken course IV. Mr. McClung.

VI. Embryology—the Ontogeny of the Chick, Shark, etc.—1st term. By appointment. Must be preceded by course IV. Foster and Balfour's Elements of Embryology. Mr. McClung.

VII. Advanced original work in courses II, III, IV, V, or VI. Students electing original work in IV, V or VI must be able to read French and German. By appointment. Professor Dyche or Mr. McClung.

Historical Geology and Vertebrate Anatomy.

Graduate work in this department is, for the present, restricted to vertebrate paleontology.

* II. Systematic Paleontology.—Lectures and laboratory work. Zittel's Handbook. 2d term. Every day, at 3. Professor Williston.

This course may be taken as a major study for the master's degree, but must be supplemented by additional reading and laboratory work equivalent to one full term's work. It will be required of all candidates for the doctor's degree in preparation for special work. The course is largely based upon the museum collections.

V. Special Work in Paleontology.—Throughout the year, by appointment. Professor Williston.

This course is research work in some topic in paleontology, with the necessary study of living forms, the nature of which must depend largely upon the special preparation of the student and the facilities of the department. Candidates for either degree may take this work, but the requirements and extent of the work for the doctor's degree will be much greater than for the master's degree. Students before entering upon this work must have satisfactorily pursued studies in the elements of physical and historical geology, zoölogy, vertebrate anatomy, and have taken the general systematic course in paleontology.

VI. Field Work in Paleontology.—Students who are sufficiently prepared may be invited to accompany the head of the department in field expeditions; or they may pursue, under the general direction of their instructor, in those special fields the kind of field work for which they have proper preparation. Professor Williston.

Physical Geology, Mineralogy, and Petrography.

VIII. Advanced Mineralogy.—Lectures and laboratory work. For students who have completed I and II, or their equivalent. 1st term, and 2d term (*a*). By appointment. Professor Haworth.

IX. Advanced Petrography.—Lectures and laboratory work. For students who have completed I and III, or their equivalent. 1st term, and 2d term (*a*). By appointment. Professor Haworth.

X. Dynamic Geology.—Daily lectures. This course is adapted to advanced students, especially those who are preparing for teaching geology. Required of senior mining engineers, first term, and may be taken as an optional study by undergraduate arts students who are sufficiently advanced. 1st term, and 2d term (*a*). By appointment. Professor Haworth.

XI. Field Work in Geology, Mineralogy, and Petrography.—For advanced students only. At present, work in geology will be confined to Kansas, but work in the other branches may be done elsewhere. Each student will be given a special area or problem to investigate, under the advice and assistance of the head of the department. Such field work, if sufficiently meritorious, will be credited as equal to one study pursued in the University for double the length of time actually spent in the field. Spring term (*b*) and summer months. Professor Haworth.

Chemistry.

* XII. Organic Preparations.—Laboratory work in organic chemistry. Every day. 1st or 2d term. Professor Bartow. This course must be preceded by chemistry IX.

* XVI. Physical Chemistry.—1st term. Lectures and laboratory work. Three times a week. Professor Franklin.

XVII. History of Chemistry and of the Development of Chemical Theories.—1st term. Three times a week. Professor Franklin.

XVIII. Inorganic Preparations.—Laboratory work. By appointment. 1st or 2d term. Professor Bailey.

XIX. Research Course in Analytical Chemistry.—By appointment. Professor Bailey.

XX. Research Course in Organic Chemistry.—By appointment. Professor Bartow.

XXI. Research Course in Physical Chemistry.—By appointment. Professor Franklin.

Before being admitted as candidates for advanced degrees in these courses, students must have taken the chemistry of the Freshman and Sophomore years, and not less than three of the optional courses offered in the department of chemistry, or their equivalents.

Civil Engineering.

Courses I to XVIII inclusive are open to candidates for the degree of M. A. Courses XIV to XXIII inclusive are open to candidates for the degree of M. S.

* I. Analytical Mechanics.—Must be preceded by calculus. 1st term. Every day, at 11. Professor Marvin.

* II. Resistance of Materials.—Must be preceded by course I. 2d term. Four days, at 10, with one afternoon in the testing laboratory. Professor Marvin and Mr. Gardner.

* III. Mechanics of Fluids.—Must be preceded by course I. 1st term (*a*). Every day, at 10. Professor Marvin.

* IV and * V. Roofs and Bridges and Elementary Designing.—Ten hours per week, throughout the year. 1 to 3. Professor Marvin. Must have been preceded by course II.

* VII. Railway Surveying.—This course must be preceded by a general course in surveying. 1st term. Every day, at 8. Mr. Searcy.

* X. Sanitary Engineering.—The removal and disposal of sewage by various methods. Water-carriage and pneumatic systems. Separate and combined systems. The construction of sewers, outfalls, and flushing appliances. The ventilation of sewers. Treatment of sewage. The collection and disposal of garbage and other refuse. Garbage destruction. Utilization of refuse. Street cleaning. 1st term. Every day, at 11. Professor Marvin and Mr. Searcy.

XIV. Geodesy.—Methods of conducting geodetic surveys. Station signals and their location. Angle measurement. Base work. Determination of latitude, longitude, time, and azimuth. Instrumental constants. Leveling by vertical angles. Precise leveling. Adjustment of observations. Figure of the earth. This course must be preceded by surveying and calculus. 1st term. Lectures and recitations. Professor Marvin.

XV. Advanced Course in Sanitary Engineering.—The public health. Contagious diseases and methods for destroying them. Bacteriological methods as applied to sanitary work. Influence of sanitary works on public health. Effect of different soils on drainage of cities and towns and the healthfulness of dwellings. House drainage, plumbing, and plumbing fixtures. Ventilation and heating of dwellings and public buildings. Water-supply from a sanitary standpoint. The purification of water. This course must be preceded by course X. 2d term. Lectures, recitations, and reading. Professor Marvin.

XVI. Materials of Engineering Construction.—Their action under different forms of stress. Methods of manufacture. Testing machines and methods. Properties of materials as determined from physical tests. This course must be preceded by course II. 1st term. Lectures and recitations, with laboratory work. Professor Marvin.

XVII. Advanced Course in Structural Design.—Cantilever, swing and suspension bridges. Skeleton frames for buildings. Train-shed roofs. Stand-pipes and elevated tanks. This course must be preceded by course V. 2d term. Lectures, recitations, and detailed designing. Professor Marvin.

XVIII. Advanced Course in Hydraulics.—Flow of water through pipes and orifices and in open channels and rivers. Improvements of harbors and tidal rivers. Navigation passes, dams, locks, jetties, dykes, and dredging. Must be preceded by course III. 2d term. Lectures and recitations. Professor Marvin.

XIX. Advanced Course in Graphical Statics.—Graphics of trusses, continuous girders, stone and metal arches. Must be preceded by course I. 1st term. Recitations and problems. Mr. Searcy.

Mechanical Engineering.

XX. Inventional Designing.—Devising of mechanisms to meet given requirements. Simple and effective arrangements of parts. Proportioning of parts and construction of working drawings. This course requires a knowledge of the principles of mechanism and machine drawing and designing. 1st term. Three hours, twice a week. Professor Palmer.

XXI. Mechanical Engineering of Power Plants.—Mechanisms of engines. Classifications of engines and a study of types. Engine accessories. Valves and valve gearing. Governors for steam-engines. Engine foundations. Engine details, from the standpoint of the designer. Engine connections. The steam-boiler, its construction, setting, and appliances. Care and management of boilers. Study of fuels and combustion. Inspecting and testing. Efficiency tests of power plants. Location and plans for power plants. This course requires a knowledge of thermodynamics and machine designing. Every day, throughout the year. Professor Palmer.

XXII. Engineering Designing.—Engine and boiler designing. To be taken only in connection with course XXI. 2d term. Three hours, twice a week. Professor Palmer.

XXIII. Locomotive Machinery.—Construction, management, and designing. Two hours per week, through the year. Professor Palmer.

Physics and Electrical Engineering.

*III. Theory of Light.—An advanced experimental study of the phenomena of velocity, refraction, double refraction, polarization, interference, and dispersion, together with the mathematical treatment necessary for the understanding of modern methods and apparatus employed. Either term. Daily, at convenience of instructor. Mr. Rice.

*IV. Electric Oscillations.—Deduction and use of Maxwell's and Hertz's equations of the electromagnetic field, electromagnetic theory of light, and a critical study of the work of Hertz and his successors. Either term. Every day, at convenience of instructor. Professor Dunstan.

*V. Thermodynamics of Gases, Saturated and Superheated Vapors.—Theory of the steam and other heat engines. 1st term. Every day, at 11. Professor Dunstan.

*VII. Theory of Electricity and Magnetism.—Mathematical development of the fundamental principles of electrostatics, magnetism, and direct currents of constant E. M. F., with special reference to their variable stage. 1st term. Every day, at 1. Professor Blake.

* VIII. Theory of Alternating Currents.—Development of the general equations in circuits containing resistance, self-induction, and capacity. This course is intended to develop the mathematical treatment of single-phase-current phenomena. 2d term. Every day, at 1. Professor Blake.

Mathematics.

All students proposing to do graduate work in mathematics must have previously taken the undergraduate courses I, II, III, and IV.

* V. Modern Geometry.—Scott. 2d term. Every day, at 11. Professor Newson.

* VI. Theory of Equations.—Burnside and Panton. 1st term. Every day, by appointment. Professor Miller.

* VII. Advanced Calculus.—Williamson. 2d term. Every day, at 10. Professor Miller.

* VIII. Differential Equations.—1st term. Every day, at 11. Professor Miller.

Courses V and VI are given in alternate years with courses VII and VIII. V and VI will be given in 1898-'99.

IX. Quaternions.—Hardy. 1st term. Every day, by appointment. Professor Miller.

X. Theory of Functions.—Based on Forsyth's Theory of Functions, with supplemental reading. Arranged for either one term or two terms, according to the needs of the student. The longer course will include elliptic, Abelian and automorphic functions. By appointment. Professor Newson.

XI. Advanced Geometry.—Higher plane curves; curves of the third and fourth order, and of the third and fourth class; and the analytic geometry of the straight line in space, the plane, and the conicoids. Arranged for courses of one term, or of two terms, as may be found desirable. By appointment. Professor Miller.

XII. Theory of Numbers.—Ordinary and complex whole numbers, residues of powers, and quadratic forms. Four hours per week, at 8. 1st term. Professor Miller.

XIII. Theory of Substitutions.—Groups, Abelian equations, and equations of the fifth degree. Four hours per week, at 3. 2d term. Professor Newson.

The following courses are by appointment:

XIV. Absolute Geometry.—Non-Euclidean. Professor Miller.

XV. Spherical Harmonics.—Professor Newson.

XVI. Logic of Mathematics.—Professor Miller.

Philosophy.

* II. Experimental Psychology.—1st and 2d term. Every day, at 3. Professor Templin.

* III. Ethics.—1st term. Every day, at 2. Professor Templin.

* IV. History of Philosophy.—2d term. Every day, at 11. Professor Templin.

* V. Cosmology.—2d term (*a*). Every day, at 9. Professor Templin.

* VI. Metaphysics.—2d term (*b*). Every day, at 9. Professor Templin.

* VII. *Æsthetics*.—1st term. Every day, at 4. Professor Templin.

VIII. Advanced Psychology.—A laboratory course consisting of special work in psychological research conducted by the student under the direction of the instructor. It must be preceded by course II, and may be pursued during either or both terms. By appointment. Professor Templin.

IX. Modern Philosophy.—An advanced course in German or English philosophy adapted to the special need of applicants. It includes a critical study of the chief works of the philosophers, preparation of theses, and conferences with the instructor. It must be preceded by courses III, IV, V, and VI. By appointment. Professor Templin.

Economics and Sociology.

The courses of study leading to the degree of M. A. are essentially an elaboration of the undergraduate courses offered as Junior and Senior optionals. There are two main groups of studies offered in economics and sociology respectively. In the former group are found extended courses of the undergraduate studies of the second year and the last half of the first year in economics. In the latter are extended courses in the first year's work in sociology. Each student is given a special course of study under one or more of the following titles; he may be required to attend the recitations in the undergraduate classes:

Economics.

II. Money and Banking, including Monetary Problems and the History and Theory of Banking. Professor Blackmar.

III. The Principles of Taxation and Finance. Professor Blackmar.

IV. Economic History and Theory, with Industrial History. Professor Blackmar.

V. Unsettled Questions in Economics, including a Study in Taxation, Land, and Railroad Statistics. Professor Blackmar.

Sociology.

VI. Principles of Sociology, Dynamic and Descriptive, with introductory work in Ancient Society and the History of Civilization. Professor Blackmar.

VII. Social Pathology, including Criminology, Charities and Correction, and Social Problems. Professor Blackmar.

VIII. Advanced Course in Sociology, including Racial Statistics. Professor Blackmar.

Courses leading to the degree of Ph. D. will be prepared for each applicant along the lines indicated below. These suggested lines imply individual research on the part of the student under the direction of the professor in charge.

A.—Economics.

(a) History and Theory of Political Economy. Professor Blackmar.

(b) Taxation and Public Finance. Professor Blackmar.

(c) Corporations and Monopolies. Professor Blackmar.

(d) Economics of Agriculture, and Land Tenures. Professor Blackmar.

B.—Sociology.

(a) Anthropology. Professor Blackmar.

(b) Principles and Theories of Sociology. Professor Blackmar.

(c) Social Pathology. Professor Blackmar.

(d) Special Studies in American and European Charities. Professor Blackmar.

An economic seminary will be conducted throughout the year for all advanced students.

European History.

Studies are open to those who have taken undergraduate courses in English, French and German history, or who can pass examination in these topics.

* I. Comparative Constitutional Law.—2d term. Every day, at 11. Professor Adams. Includes the optional course for undergraduates entitled "History of Institutions." In addition, graduates will undertake a critical study of existing constitutions and fundamental laws of European nations.

* II. Political History of modern Europe (1792 to present time).—1st term. Every day, at 11. Professor Adams. Includes optional course for undergraduates of same title. In addition, graduates will select some treaty-making period in the course for special study. Map work and historical geography a specialty.

III. English Constitutional History.—2d term. By appointment. Professor Adams. Study of the principal authorities, with special work and thesis on some selected topic.

IV. Epochs of French History.—1st term. By appointment. Professor Adams. For students who can read French readily. Selection of special epoch as topic and study of French authorities.

American History and Administration.

* V. Presidential Administrations—Washington to Jackson.—1st term, at 3. Must be preceded by undergraduate course III. Professor Hodder.

* VI. Presidential Administrations—Jackson to Lincoln.—2d term, at 3. Continuation of course V. Professor Hodder.

VII. Constitutional Law—Madison's Journal and Boyd's Cases.—1st term, at 4. Professor Hodder.

VIII. International Law—Hall's International Law.—2d term, at 4. Professor Hodder.

IX. American Historical Seminary.—Open to students who have passed courses V and VI. Hours by appointment. Professor Hodder.

Greek.

* VII. Aristophanes: Clouds, Acharnians, Frogs, and Birds.—Lectures and private reading on comedy and Attic history. 1st term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1898-'99. Professor Wilcox.

* VIII. Homer's Iliad.—Reading of the whole book. Lectures. Critical interpretation of select passages. Special studies of text and content. 2d term. Every day, at 10. For Juniors and Seniors who have taken courses III, IV, and V, or VI. Given in 1898-'99. Professor Wilcox.

Latin.

* V, * VI, * VII, * VIII. See statement of undergraduate courses, page 46.

IX, X. Seminary and Reading.—Some author or department of Latin literature is chosen each year for critical study. The work will consist largely of papers by members of the seminary, the aim being to train students for original investigation. Horace will probably be chosen for the year 1899-1900. Hour by appointment. Professor Walker.

German.

* VII. German Literature of the Eighteenth Century.—Lectures, with reading of masterpieces out of class, with comment on more difficult works in class. Essays and criticisms by members of the class. Klopstock, Wieland, Lessing, Herder. 1st term. Every day, at 11. Open only to students who have had German III, IV. Professor Carruth.

* VIII. German Literature of the Eighteenth Century (continued).—Goethe, Schiller, and the close of the century. 2d term. Every day, at 11. Professor Carruth.

* IX. German Historical Novels: Hauff, Scheffel, etc.—Careful reading in class of one work by each author, others rapidly outside. Lectures on the history of the novel and on methods and schools in fiction. Theses on separate authors and on the whole course, by members of the class. 1st term. Every day, at 11. Professor Carruth.

* X. German Historical Novels (continued): Freytag, Dahn, etc.—2d term. Every day, at 11. Professor Carruth.

*XII. Gothic.—Phonetics and introduction to Germanic philology. 1st term. Every day, at 10. Professor Carruth.

*XIII. Middle High German.—Grammar. Nibelungenlied. Hartman, Der arme Heinrich. Selections from Walther von der Vogelweide. Lectures. 1st term. Every day, at 9. Professor Carruth and Mr. Engel.

*XIV. Luther.—Reading and grammatical study of the German literature of the Reformation. 2d term. Every day, at 9. Professor Carruth.

French.

*VII. The Romantic School: 1800-1835.—Origin and ideas. Chateaubriand, Lamartine, Victor Hugo, Alfred de Vigny, Alfred de Musset. 1st term. Every day, at 10. Professor Canfield.

*VIII. The Development of the Novel in this Century.—Hugo, George Sand, Balzac. The later realism. 2d term. Every day, at 10. Professor Canfield.

*X. History of French Literature.—Lectures, recitations, and private readings. 2d term. Every day, at 11. Professor Galloo.

English.

A.—English Literature.

*X. Invention and Literary Criticism.—Development and theories of literary forms; practice in composition; lecture, conference and library course; presentation of thesis required. Advanced course open only to students who have taken English B, VI, and English A, I and II, or their equivalent, and to be preceded, if possible, by two additional courses in English A. 1st term. Every day, at 11. Professor Hopkins.

B.—Rhetoric and English Language.

*II. Anglo-Saxon.—Bright's Anglo-Saxon Reader. 1st term. Every day, at 9. Professor Dunlap.

*III. Anglo-Saxon.—Bright's Anglo-Saxon Reader and Beowulf. 2d term. Every day, at 9. Professor Dunlap.

*IV. Middle English.—Morris's Specimens of Early English, part I. Middle English grammar, philology, and phonology. Thesis required. 1st term. Every day, at 10. Professor Hopkins. Must be preceded by Anglo-Saxon and elementary German.

*V. Middle English.—Morris and Skeat's Specimens of Early English, part II. Skeat's Piers Plowman. The life and literature of the fourteenth century. Thesis required. 2d term. Every day, at 11. Professor Hopkins. Must be preceded by course IV.

Pharmacy.

III. Analysis of Plant Constituents (proximate analysis).—Must be preceded by qualitative and quantitative analysis and organic chemistry. 1st term. Every day, by appointment. Professor Sayre.

Education.

* VIII. Educational Theory.—A critical study of the educational doctrines found in the writings of Plato, Quintilian, Comenius, Locke, Rousseau, Herbart, and Spencer. Reports, discussions, and special studies. 1st term. Every day, at 10. Professor Olin.

* X. Problems of Organization, Management and Method in School Systems.—Library work, reports, and discussions. 2d term. Every day, at 10. Professor Olin.

* XI. (a) Comparative Study of Educational Systems.—Lectures, conferences, and special studies. (b) Philosophy of Education.—Library work and discussions. Work mainly based on Rosenkranz, Bain, Sully, and Compayré. 1st term. Every day, at 4. Professor Olin.

Attendance on the weekly educational conference is required of graduate students in education. Lectures, special studies, and discussions.

Music.

I. Contrapuntal Harmony.—Chord construction, chord relationship, chord progressions. Monday and Thursday throughout the year, at 11. Professor Penny.

II. Musical Composition.—For those who have had I. Monday and Thursday throughout the year, at 9. Professor Penny.

III. History of the Fine Arts.—Two hours a week throughout the year. Professor Penny.

University Extension.

The University of Kansas recognizes University Extension work as an appropriate part of its services. The importance and success of University Extension has been proven by repeated experiments in England and America. Such institutions as Johns Hopkins, Yale, the University of Pennsylvania, the University of Indiana, the University of Wisconsin and the Chicago University make University Extension a part of their regular work.

University Extension is simply university teaching carried on outside of the University. Its purpose is to give instruction to those who have been denied the privileges of regular university training, and to enable those who have begun university courses to continue them under the direction of university instructors. In short, University Extension is for the express benefit of those who are unable to attend the University.

The instructors of the University have been in the habit of giving, from time to time, when asked by the public, single lectures in different parts of the state. University Extension groups these single lectures about a special topic, and aims to give organic instruction upon it. It will thus be seen that the work is in accordance with the spirit and practice of the University of Kansas.

The following thirty-four courses of University Extension lectures are offered by the University of Kansas to communities desiring them. The lectures are prepared with a view to continuous study of a given subject, and for solid instruction rather than entertainment alone. They include readings, conferences, and examinations, and are open to all persons who form themselves into a class. At the close of every course an examination is given to the members of the class who may desire it.

Persons who hold the degree of bachelor of arts from the University of Kansas, or from other institutions of equal rank with it, may receive the degree of master of arts upon the satisfactory completion of nine University Extension courses of twelve lectures each. The extension lecturers shall register the courses of candidates for the second degree with the Committee on Graduate Studies, and report to it the result of all examinations. These courses shall be accompanied by such study, reading and examination as shall be prescribed by the professors in charge.

Persons not holding the bachelor's degree may receive a University Extension diploma upon the satisfactory completion of nine University Extension courses of twelve lectures each.

Work done under instructors from other institutions than the University of Kansas will be accepted upon examination for not more than four of the nine courses necessary for a degree or a diploma. This work will also be accepted as undergraduate work, a full course of University Extension being reckoned as a two-thirds term in the University. Nine twelve-lecture courses will be accepted as equivalent to one full year's work at the University.

No credit for University Extension courses will be given to students taking work in the University.

The records of all work done under the direction of the University of Kansas will be kept on file at the University.

Not more than one lecture per week will be given in any one of the following courses.

Literary and scientific clubs and associations and reading circles desiring to avail themselves of University Extension lectures should form a local association and organize a class, fixing the tuition at a rate sufficient to cover expenses.

The courses offered are as follows:

Studies in Shakspeare. By C. G. Dunlap, Litt. D.

English Literature of the Nineteenth Century. By C. G. Dunlap, Litt. D.

Political Economy. By F. W. Blackmar, Ph. D.

Money and Monetary Theories. By F. W. Blackmar, Ph. D.

Taxation and Public Finances. By F. W. Blackmar, Ph. D.

The Chemistry of Every-day Life. By E. H. S. Bailey, Ph. D.

Electricity and its Modern Applications. By L. I. Blake, Ph. D.

Heat, Light, and Sound, and their Practical Applications. By L. I. Blake, Ph. D.

German Literature (first classic period). By W. H. Carruth, Ph. D.

German Literature (second classic period). By W. H. Carruth, Ph. D.

German Literature (Faust). By W. H. Carruth, Ph. D.

Astronomy. By E. Miller, Ph. D.

Geology. By E. Haworth, Ph. D.

The Romantic School in France. By A. G. Canfield, A. M.

Development of the Novel in France. By A. G. Canfield, A. M.

Classical Greek Literature for English Readers. By A. M. Wilcox, Ph. D.

Greek Architecture and Sculpture. By A. M. Wilcox, Ph. D.

History of Music. By G. B. Penny, B. S.

Voice Training and the Art of Singing. By G. B. Penny, B. S.

Medical Chemistry and Sanitary Science. By L. E. Sayre, Ph. M.

Physiological Chemistry. By L. E. Sayre, Ph. M.

Ethics. By Olin Templin, A. M.

Psychology. By Olin Templin, A. M.

American History. By F. H. Hodder, Ph. M.

Government of the United States. By F. H. Hodder, Ph. M.

Municipal Government. By F. H. Hodder, Ph. M.

- International Law. By F. H. Hodder, Ph. M.
Roads, Streets, and Pavements. By E. C. Murphy, C. E.
American Literature. By E. M. Hopkins, Ph. D.
The German Empire. By E. D. Adams, Ph. D.
The French Revolution. By E. D. Adams, Ph. D.
Evolution. By F. H. Snow, Ph. D., LL. D.
History of Education. By A. S. Olin, A. M.
Drawing. By A. H. Clark.

Miscellaneous Information.

STUDIES.

Unless otherwise prescribed, the regular work of any student shall consist of three full studies. More or less than this amount may be taken only by permission of the Faculty.

TEACHER'S DIPLOMA.

By authority of the Board of Regents, A. B., A. M. and Ph. D. graduates of the School of Arts who have taken three terms' work in the department of education and one teachers' course in some other department may receive the teacher's diploma of the University. On presentation of this diploma, the state board of education will issue a three years' state teacher's certificate. At the expiration of the three years' certificate a life certificate will be issued, if the candidate has taught successfully two of the three years.

THE UNIVERSITY GEOLOGICAL SURVEY.

By enactment of the Board of Regents, March 28, 1895, and in accordance with the state law under which the University is now being administered, the University Geological Survey of Kansas was formally organized, with the Chancellor *ex officio* director; Prof. S. W. Williston, paleontologist; Prof. Erasmus Haworth, geologist, and Prof. E. H. S. Bailey, chemist.

It is proposed to conduct a systematic geological survey of the state, including investigations along all lines of research which a liberal interpretation of the law will permit. Advanced students will find this a most helpful means of obtaining practical training in all branches of geology. Already considerable work has been accomplished, the report upon which has been published in volumes I, II, III and IV of the University Geological Survey.

PHYSICAL TRAINING.

All students of the first and second years take systematic physical training three times per week. Each student receives a medical and physical examination at the beginning of his course and comparative examinations from time to time. These will greatly assist in determining the amount and kind of exercise that will best promote health, and a proper physical development in the individual. Classes will be organized at such times as suit the greatest number of students, and special work will be encouraged as much as possible. The ladies are in charge of a lady instructor. The work is so graded as to lead

the student up from the simpler and lighter form of exercise to the more complex and more difficult, so that in the Junior and Senior years each one will be able to follow out the sport that most appeals to him.

The University has adopted the rules governing athletics known as the "Presidents' Agreement," and healthy amateur sport is encouraged in its several branches, viz.: Football, baseball, basket-ball, tennis, track and indoor athletics, and rowing.

Each candidate for a sport must pass a physical examination as to his ability to take part in it, and candidates for a University team must also have a satisfactory standing in their classes.

UNIVERSITY MEN IN THE WAR.

The University is proud to call attention to the following list of men who left their studies last year and volunteered their services for maintaining and defending their country's honor. The roll of honor is as follows:

TWENTIETH REGIMENT, KANSAS VOLUNTEERS.

Alfred Cecil Alford, First Lieutenant Company B; killed at Callocan, P. I., February 7, 1899.

Clarence Leroy Cole.

Charles Edmund Cook.

Harry Glenn Davis.

George Mark Davison.

Nathaniel Thomas Foster, Corporal Company I.

Arthur P. Hargis.

Roy Scott Haynes, Musician in regimental band.

Ruford Arling Hazen, Sergeant Company H.

David Martin Horkmans, Corporal Company H.

Arthur Page Jackson, Corporal Company B.

Benjamin H. Kerfoot, Corporal Company B.

Elmer D. Mabry.

Edwin B. Morgan.

William Gordon Parks.

Carroll Rubicam Phenicie, Sergeant Company F.

Myron DeVere Rafter, Hospital Steward.

Otto William Rethorst, Corporal Company H.

Charles Hoke Simpson, Commissary Sergeant Company H.

Ernest Guy Simpson, Second Lieutenant Company L.

Maurice Vain Van Meter, Corporal Company A.

Walter Anton Wyatt.

William Herman Zwick.

TWENTY-FIRST REGIMENT, KANSAS VOLUNTEERS.

Harvey Kreamer, Sergeant.

Herbert Spencer, Hospital Corps.

TWENTY-SECOND REGIMENT, KANSAS VOLUNTEERS.

Philo Semple Burkholder.

Hoite Cates.

Arthur Albert Greene, Quartermaster Sergeant Company H.

Harold Eliphalet Hoyt.

Andrew Hudson.

Edward Payson Irwin.

Charles Albert Peddicord.

Samuel Hendrun Peters, Sergeant-Major of regiment.

George Henry Rising, Second Lieutenant Company H, and Adjutant of Second Battalion.

Thomas Davenport Smith, Sergeant-Major of Third Battalion.

Edward Bruce Spiers.

Otho Strahl.

Harry P. Temple.

Will J. Van Meter.

Charles J. Watson.

TWENTY-THIRD REGIMENT, KANSAS VOLUNTEERS.

James Lincoln Beck.

John Andrew Gregg, Commissary Sergeant.

William Walter Penn.

FOURTH REGIMENT, MISSOURI VOLUNTEERS.

Littleton P. Dryden, Sergeant.

UNITED STATES REGULAR ARMY.

Mark Wheeler, Second Lieutenant, Fourth Infantry.

OTHER UNIVERSITY MEN.

Other University men in the late war are as follows:

Brig.-Gen. Frederick H. Funston.

Col. Wilder S. Metcalf, Twentieth Kansas.

Lieut.-Col. Edward C. Little, Twentieth Kansas.

Capt. Fred E. Buchan, Company B, Twentieth Kansas.

Capt. Adna G. Clarke, Company H, Twentieth Kansas.

Capt. William J. Watson, Company D, Twentieth Kansas.

Capt. Sherman A. Harvey, Company B, Twenty-third Kansas.

First Lieut. Ernest H. Agnew, Company I, Twentieth Kansas.

First Lieutenant Fry, Company L, Twentieth Kansas.

First Lieut. J. F. Hall, Company K, Twentieth Kansas.

First Lieut. J. W. Clark, Company B, Twenty-third Kansas.

First Lieut. Harry Seckler, Company C, Twentieth Kansas.

Second Lieut. Fred Stone, Twenty-third Kansas.

Lieut. A. B. Bates, Third Missouri.

First Lieut. H. A. Lamb, Quartermaster Twenty-second Kansas;
died at Providence hospital, Washington; D. C.

First Lieut. A. B. Schaeffer, Twenty-second Kansas.

Capt. E. L. Glasgow, Company M, Twentieth Kansas.

Com.-Sergt. Harry Smith, Third Missouri.
Corp. Ralph Leavitt, Company C, Twentieth Kansas.
Corp. Elwood F. Hook, Twentieth Kansas.
Private Larrance Page, Twentieth Kansas.
Private Peter Woodsides, Twenty-third Kansas.
Private Harry Sheldon, Sixth Missouri.
Private Maurice Murphy, Fourth Missouri.
Private James Edgar Northrop, Twentieth Kansas.
Private John M. Steele, Company H, Twentieth Kansas.

DISCIPLINE.

That the generosity of the state may not be abused, and that perfect justice may be done all who are earnestly striving to make the best possible use of the opportunities offered, there is but a single requirement: unexceptional deportment and strict attention to University duties.

EXAMINATIONS.

Examinations, oral and written, are held as frequently as the judgment of the instructor commends, at least at the close of the work in each subject.

Absence from examination or failure in more than one-third of his work, in any one term, severs a student's connection with the University.

RECORD OF STANDING.

At the close of each term, a summary of the students' work is reported to the Registrar, for entry upon the general record. At the end of each half year, the parent or guardian of each student, or the student, if requesting it, is furnished with a copy of the entries relating to that student.

DEVOTIONAL EXERCISES.

Devotional exercises are held in University Hall every morning. All students are cordially invited to attend these exercises.

DEGREES CONFERRED ON GRADUATION.

Any student, on completing the work assigned for the Freshman, Sophomore, Junior and Senior years in the School of Arts, will receive the degree of bachelor of arts; on completing any of the courses in the School of Engineering, the degree of bachelor of science; graduates from the Law School will receive the degree of bachelor of laws; from the School of Pharmacy, the degree of pharmaceutical chemist (Ph. C.); and those from the School of Music, the degree of bachelor of music (Mus. B.)

For information concerning advanced degrees for postgraduate study, see that portion of this catalogue relating to "The Graduate School," pp. 114 to 128.

THE WILLIAM J. BRYAN PRIZE FUND.

Hon. W. J. Bryan, of Lincoln, Neb., last year gave \$250 to the University, to be used as follows: This sum is to be invested, and the

yearly interest on the same is to be given that student presenting the best thesis on some one principle of our government. The details of the contest are entrusted to the Faculty of the University.

SCHOLARSHIPS.

The University offers the following scholarships, each paying \$100:

1. The D. H. Robinson Memorial Scholarship of the Alumni Association. This is an undergraduate scholarship supported by the Alumni Association, and is open to Juniors and Seniors of the Schools of Arts and Engineering. Held in 1898-'99 by Flint L. Wemple, Lawrence, Kan.

2. The D. H. Robinson Graduate Latin Scholarship. Held in 1898-'99 by Tenny Frank, A. B. '98, Kansas City, Mo.

3. The Lawrence Citizens' Graduate Latin Scholarship. Martha Phillipa Williams, A. B. '98, Topeka, Kan.

THE EDWARD THOMPSON PRIZE.

The Edward Thompson Company, Northport, Long Island, N. Y., publishers of the "American and English Encyclopedia of Law," offer a set of this valuable work each year to that member of the Law School presenting the best thesis on a subject assigned by the Faculty of that School.

NON-ACADEMIC WORK.

Believing that the strength and value of the University is measured by its service to the state at large, and wishing to reach as many of our citizens as possible in a helpful and stimulating way, the University authorities cordially invite all who desire to pursue special or general courses of reading and investigation to connect themselves with the University, or to correspond with those in charge of such studies. Suggestions as to authorities, arrangements of topics, prices of books, etc., will be gladly given. Those pursuing this special work at the University will have the advantage of daily recitations, lectures, library, laboratories, etc.

All who are seeking special information or self-culture and the highest line of citizen life and influence should feel that, by the generosity of the state, advice and information are freely placed at their command. Personal supervision, by correspondence, will be cheerfully given to the work of reading clubs or associations for study; and an occasional visit from some member of the Faculty can be secured, when desired by such associations, on application.

LECTURES OFFERED TO KANSAS COMMUNITIES.

In order that as many people of the state as possible may receive some immediate benefit from the University as an institution established for the dissemination of learning, a large number of lectures are offered to Kansas communities by the Faculty of the University. For these lectures no charges are made beyond the actual expenses of the lecturers, when the lectures are made free to the public; but

when admission is charged the lecturer will require a fee of five dollars, besides expenses. For experimental lectures, or those illustrated with lantern slides, an additional fee of five dollars may be charged. These lectures are suitable for delivery under the auspices of high schools, educational, literary or religious societies. The list of lectures thus offered for the academic year 1898-'99 comprises eighty-one different subjects, and includes the names of twenty-three members of the University Faculty. All correspondence regarding these lectures should be addressed to the Chancellor of the University.

THE "KANSAS UNIVERSITY QUARTERLY."

The *Kansas University Quarterly* is maintained by the University as the medium for the publication of the results of original research by members of the University. Papers are published in it only on recommendation of the committee of publication, which committee is composed of six professors and the managing editor. The *Quarterly* is issued regularly, as indicated by its title: No. 1, Vol. 1, is dated July, 1892. Beginning with Vol. VI, the *Quarterly* has appeared in two series: *A*, science and mathematics; *B*, philology and history. Each number contains fifty or more pages of reading matter, with necessary illustrations, the four numbers of each year constituting a volume. The price of subscription is two dollars a volume, single numbers varying in price with cost of publication. Exchanges with similar publications of other colleges or universities and of learned societies are solicited. All communications regarding the *Quarterly* should be addressed to W. H. Carruth, managing editor, Lawrence.

PAPERS.

The weekly papers heretofore existing have been consolidated into one paper, *The University Weekly*. The students of the School of Law publish the *Kansas University Lawyer*, a paper devoted to the interests of that school.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

The Young Men's Christian Association is an organization composed of active Christian men of the school, banded together for the purpose of preserving and advancing the spiritual interests of the University. This object is attained through the religious meetings held on Sunday afternoons at North college, through the work of the missionary and Bible study departments, and through the helpful Christian fellowship of the men in their intercourse one with another.

The missionary committee, in connection with that of the Young Women's Christian Association, maintains a class in missionary study, pursuing the course of study outlined by the student volunteer movement. In no department of the association has the work been more successful the past year than in that of Bible study. Five separate classes have taken courses in Bible instruction, under the direction of the Bible-study committee.

These are two classes in the life of Christ, one in the book of Isaiah, one in the New Testament in the original Greek, and a workers' training class. In all, about fifty men have availed themselves of this opportunity for Bible study. The Bible work for the coming year will be essentially like that of the past year, except that the number of classes will be increased and at least one new course, in the life of Paul, will be added.

The social life of the association finds expression in socials given at intervals through the year. Besides the large public receptions, the social committee arranges a series of small socials reaching different classes of men at different times.

Since January 1, 1899, the organization has rented two large parlors for social purposes, and entertainments were provided for some of the men at least once every week. A similar policy will be followed throughout the next year and probably on a larger scale.

Members of the association will meet new students at the trains and will assist them in finding rooms, boarding places, and employment, if so desired. There will be sent to any address, on application, a handbook giving valuable information to prospective students. Address the president of the association.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

The Young Women's Christian Association is an association of young women in the University, with aims similar to that of the Y. M. C. A. Regular meetings are held every Wednesday afternoon, at five o'clock, and the organization unites with the Y. M. C. A. in the course of lectures mentioned above. Several Bible classes are conducted under the auspices of this association. An effort is also made at the beginning of the year to assist young women just entering the University in securing boarding places, and, when desired, places in homes where board may be obtained for assistance in housework.

WOMAN'S LEAGUE.

The Woman's League is an association organized to welcome the young women to the University, to aid them in securing boarding places, and to render them all other assistance in its power. It includes in its membership the women of the Faculty, the wives of members of the Faculty, and the young women students of the University. One object of this league is to promote a healthful social life among students, who are cordially invited to the homes of its members.

SOCIETIES.

Literary Societies, a Moot Senate, a German Club, a French Conversation Club, a Chemical Seminary, a Pharmaceutical Club, a Biological Club, a Greek Symposium, a Civil Engineering Society, an Electrical Seminary and a Seminary of History and Political Science are regularly organized and maintained by the students. A

large number of standard periodicals, furnished by these clubs, are placed in the University reading room for the use of all students.

TERMS AND VACATIONS.

The academic year is divided into two terms of equal length, the first beginning on the first Wednesday following the 4th of September; the second ending on the first Wednesday following the 5th of June.

There are two vacations: One, the summer vacation of thirteen weeks, following the commencement, in June; the other, of two weeks, at the Christmas holidays. Besides these, Thanksgiving day and the following Friday and Monday, and Arbor day (Thursday), with the following Friday and Monday, are observed as holidays.

TUITION FREE.

Tuition is free to Kansas students in every school of the University, and no contingent or admission fee is required of inhabitants of the state.

The fees for non-residents are as follows:

School of Arts, per annum.....	\$10 00
School of Engineering, per annum.....	10 00
School of Law, per annum.....	25 00
School of Pharmacy, per annum.....	25 00
School of Music, tuition per quarter.....	35 00
School of Medicine.....	25 00

The fee to cover cost of material used and apparatus broken is required in advance of all students in chemistry, pharmacy, medicine, physics, natural history, and civil engineering.

A graduation fee of \$5 is required in all departments.

EXPENSES.

There are no dormitories owned or managed by the University. Students find accommodations in the boarding-houses and homes of Lawrence.

The average price of board, including rooms, light, and fuel, may be placed at \$3.50 a week. Some persons who furnish plain rooms and good, plain food, receive boarders at \$3 or even \$2.50 a week. Day board in private families and at city restaurants may be obtained for \$2.50 to \$3 a week.

Day board in clubs varies, according to the economy practiced, from \$1.75 to \$2.50 a week. On this plan, a company of students appoints a steward or a committee to arrange terms with a competent housekeeper, to buy provisions as needed, to keep a list of rooms for rent in the vicinity, and to collect from the membership the cost for each week.

Furnished rooms, generally occupied by two students, cost from \$4 to \$10 a month.

The following is a fair estimate of yearly expenses:

Board, 40 weeks, at \$2 to \$3.50	\$80 00 to \$140 00
Room rent, 40 weeks, 50 cents to \$2	20 00 to 80 00
Washing.....	10 00 to 20 00
Books.....	15 00 to 30 00
Incidentals.....	15 00 to 50 00
Totals	<u>\$140 00 to \$320 00</u>

Those who can supply the furniture for rooms, buying and preparing the provisions for the table themselves, can thus board for very little cost in money, not a few students actually going through at an expense of \$75 per annum.

All requests for further information should be addressed to the Registrar, State University, Lawrence Kan.

Roll of Students.

Graduate Students.

- Abel, Annie Heloise, A. B. '97, *American History and Philosophy*, Salina.
- Beach, George Thomas, A. B. Campbell, *Sociology, Anglo-Saxon*, Havensville.
- Beede, Joshua William, A. B. Washburn, A. M. '98, *Paleontology*, Topeka.
- Belcher, Charles Norton, A. B. '98, *Economics, Sociology, and American History*, Enterprise.
- Burney, Clarence Alexander, A. B. '95, *History, Sociology, and American History*, Kansas City, Mo.
- Canavan, Asa Lord, B. S. '89, *Mechanical Engineering*, Newton.
- Curry, Joseph Ellsworth, A. B. '86, *Sociology, Cranbury, N. J.*
- Clark, Arthur Wellington, M. D. Harvard, *Bacteriology and Sanitary Engineering*, Lawrence.
- Daum, Nicholas Freeland, A. B. Valparaiso Normal, *Sociology, Economics, and History*, Lawrence.
- Elliott, Philip Sheridan, A. B. '98, *Sociology*, Mayetta.
- Frank, Tenny, A. B. '98, *Greek and Latin*, Kansas City, Mo.
- Gilmore, Frank Lansing, B. S. '98, *Mechanical Engineering and Power Plants*, Lawrence.
- Grove, Bessie Eleanor, A. B. '97, *Mathematics*, Lawrence.
- Greider, William Henry, A. B. '98, *Latin and German*, White Cloud.
- Grimsley, G. P., A. B. Ohio State University, Ph. D. Johns Hopkins, *Geology*, Topeka.
- Haven, Elmer Franklin, A. B. '98, *Constitutional Law*, Pleasanton.
- Hyatt, Katherine Swope, A. B. Ohio Wesleyan '93, *Sociology and Economics*, Altamont.
- Henderson, Henrietta L., A. B. Baker, *Sociology and Pedagogy*, Clay Center.
- Jio, Mamoru, B. S. '98, *Civil Engineering*, Tokyo, Japan.
- Kraus, Charles August, B. S. '98, *Electricity and Mathematics*, Hays City.
- Kirby, Laura Ellen, A. B. '97, *French, English, and Sociology*, Lawrence.
- Morscher, Lawrence Norton, B. S. '96, *Chemistry and Geology*, Lawrence.

Myers, William Lewis, A. B. '98, <i>Sociology</i> ,	El Dorado.
Macomb, John de Navarre, jr., B. S. M. S., <i>Chemistry and Engineering</i> ,	Pittsburg.
Magaw, William Glenn, A. B. Washburn, <i>Latin</i> ,	Osage City.
Messerley, Charles Gottlieb, A. B. '98, <i>American History and Economics</i> ,	Osage City.
Neal, Robert Wilson, A. B. '98, <i>English</i> ,	Columbus.
Neal, Stella May, A. B. '94, <i>Spanish</i> ,	Columbus.
Overlander, Jacob Alpheus, A. B. Washburn, <i>Sociology and Economics</i> ,	Leona.
Preeman, Jacob Myers, A. B. Leland Stanford, Jr., <i>Mathematics</i> ,	Kansas City, Mo.
Prentice, Sydney Clarke, A. B. '96, <i>Vertebrate Anatomy</i> ,	Lawrence.
Parrott, Percy John, A. B. '97, <i>Entomology and Anatomy</i> ,	Manhattan.
Rench, William Stull, <i>English, American History, and Sociology</i> ,	Dighton.
Rush, Elmer Ellsworth, A. B. '95, <i>American History</i> ,	Kansas City, Mo.
Spiers, Edward Bruce, A. B. '98, <i>Chemistry</i> ,	Lyons.
Stewart, Alban, A. M. '96, <i>Vertebrate Anatomy</i> ,	Odessa, Mo.
Sharpe, Charles Manford, A. B. '97, <i>Sociology and Philosophy</i> ,	Lawrence.
Smith, Ida Greeley, A. B. '97, <i>French</i> ,	Lawrence.
Tinsley, Nora Maude, A. B. '97, <i>Economics and American History</i> ,	Horrr, Mont.
Thompson, Martha Alice, A. B. '92, <i>Latin</i> ,	Lawrence.
Warde, Blanche, A. B. '98, <i>Sociology, Pedagogy, and Biology</i> ,	Lawrence.
Winslow, Barclay C., B. S. Penn College, <i>Chemistry, Mineralogy, and Geology</i> ,	Tonganoxie.
Graduates, 42.	

School of Arts.

SENIORS.

Baillie, Veda,	Lawrence.
Beach, George Thomas,	Havensville.
Blakely, Ellen Jerusha,	Junction City.
Boring, Nellie Catherine,	Osborne.
Bowen, Bertha,	Centralia.
Bright, Robert Paul,	Pleasanton.
Case, Frank Elwell,	Marion.
Case, Ida May,	Norton.
Case, Stella McKenzie,	Norton.
Caughey, Catherine Margaret,	Horton.

Cloyes, John Marshall,	Lancaster.
Cook, William Alexander,	Stafford.
Cooper, Walter Loring,	Winfield.
Coppedge, Robert William,	Langdon.
Cowley, Laurence Leon,	Columbus.
Cross, Walter Martin,	Wa Keeney.
Cubine, Georgia Vivian Zoe,	Coffeyville.
Diesem, Harry Custer,	Garden City.
Dixon, Daisy,	Haskell.
Douthart, Lela Ferree,	Pratt.
Emley, Samuel Charles,	Great Bend.
Fuller, Cora Jane,	Eureka.
Goode, Mary Lane,	Olathe.
Graham, Walter Baber,	Brantford.
Gregg, G. Archie,	Eureka.
Grimes, George D.,	Hiawatha.
Gustafson, Carl Fred,	McPherson.
Gwin, John Arthur,	Haddam.
Hayes, Beatrice Bertha,	Lawrence.
Hazen, Raymond Crandall,	Lawrence.
Henderson, Willis Eddy,	Iola.
Hess, Harrison Henry,	Wichita.
Hopkins, Ross,	Holton.
Hoyt, Harold Eliphalet,	<i>Cambridge, N. Y.</i>
Hyde, Emma,	Geneva.
Ide, Arthur Wheaton,	<i>Creston, Iowa.</i>
Jewett, Frank Leonard,	Olathe.
Johnson, Bessie,	Winfield.
Kane, John Henry,	Greensburg.
Kelley, Walter Lawrence,	Frankfort.
Lee, Agnes,	<i>Kansas City, Mo.</i>
Lee, Mary Cornelia,	Manhattan.
Lofty, John,	Osage City.
Macomb, John de Navarre, jr.,	Pittsburg.
Majors, Joseph Oliver,	Girard.
Moore, Clinton James,	Oketo.
McClair, Charles,	Carbondale.
McCurdy, Anna Vesta,	Hutchinson.
McDonald, Norman,	Lawrence.
McDowell, H. Martin,	Lawrence.
Nowlin, Clifford Hiram,	<i>Kansas City, Mo.</i>
Oliverson, Minnie Jane,	Winfield.
O'Neil, Ernest Richard,	Wellsville.
Parrott, Alfred H.,	Lawrence.
Pendleton, Ellen,	Lawrence.
Pieratt, James Monroe,	Strawn.
Poff, Grace Estelle,	Lawrence.

Pratt, Frank Preston,	Phillipsburg.
Rench, William Stull,	Beeler.
Riggs, Lucy Young,	Lawrence.
Rodgers, George Dick,	Topeka.
Rogers, Austin Flint,	<i>Kansas City, Mo.</i>
Rose, Clinton Emmet,	Concordia.
Seeds, Guy Clifford,	Garden City.
Sellards, Elias Howard,	Scranton.
Shinn, Edwin Frank,	Quenemo.
Sluss, Clarence Alfred,	Wichita.
Stone, Elizabeth,	Lawrence.
Summerfield, Solon,	Lawrence.
Sutton, Will Black,	Kansas City.
Swayze, Jason Clarke,	Topeka.
Taylor, Isaac Daniel,	Hartford.
Taylor, LaMonte,	<i>Kansas City, Mo.</i>
Vickers, Elizabeth May,	Paola.
Wagner, George,	Lawrence.
Watson, Rosalia Blanche,	Lawrence.
Whitman, Ruth Heywood,	Lawrence.
Wilson, Carey Josephus,	Ottawa.
Zimmerman, Cornelia Virginia,	Lawrence.

Seniors, 79.

JUNIORS.

Adams, Leverett Allen,	Lawrence.
Baillie, Gertrude	Lawrence.
Baumgartner, William Jacob,	Halstead.
Buzzi, Antonio,	Arkansas City.
Cassity, Galen Edward,	Bern.
Colman, Nellie Mabel,	Lawrence.
Combs, Rollie David,	Winfield.
Converse, Blanche Elizabeth,	Rhinehart.
Cook, John Elmer,	Newton.
Copeland, Cecil Edwin,	Russell.
Copley, Edward,	Lawrence.
Creager, Tina Violet,	Jamestown.
Dale, Ella Alice,	Belleville.
Durland, Benjamin Merrill,	Centralia.
Earnest, Stella Rice,	Arkansas City.
Everett, Edna,	Lawrence.
Ewing, Henry Zachariah,	Frankfort.
Fanger, Mary Louise,	Girard.
Fones, Harry Porter,	Lyons.
Garver, Robert Diller,	Topeka.
Gilmore, Jerome Odell,	Lawrence.
Glick, Frank Lewis,	Junction City.
Goodnight, Lizzie Evelyn,	Frankfort.
Goudy, Arthur Lincoln,	Tonganoxie.

Grosh, Lulu,	Haysville.
Hanna, Thomas Bertram,	Altamont.
Henderson, Henrietta L.,	Iola.
Henry, John Jacob,	Lawrence.
Hill, Gertrude Winslow,	Lawrence.
Hirschler, Arnold Samuel,	Hillsboro.
Housh, Addison Emmet,	Oskaloosa.
Hughes, Richard John,	<i>White Eagle, Okl.</i>
Hull, Arthur Sinclair,	Lawrence.
Hutchinson, Winslow,	<i>Carthage, Mo.</i>
Irwin, Will Herbert,	Lawrence.
Keplinger, Fred.,	Oskaloosa.
Klise, Clarence Eugene,	Minneapolis.
Lacey, Ellsworth Taylor,	Dillon.
Landis, May,	Lawrence.
Laycock, Marion Francis,	Marysville.
Lenker, Lyman Gilbert,	Wellington.
Liscum, Fred. S.,	Geneseo.
Lizberg, John Andrew,	Oberlin.
Mains, James Roy,	Oskaloosa.
Maynard, Frances Bessie,	Osawatomie.
Morris, Mary Elizabeth,	Hiawatha.
Moulton, Fay R.,	Marion.
Mueller, Madeline Minnie,	Lawrence.
Muir, Margaret,	Salina.
Myers, Clarence,	Osage City.
McCrary, Virginia,	Lawrence.
McFarland, David Ford,	Lawrence.
Parrott, Edith May,	Lawrence.
Perdue, Rosa Maude,	Fort Scott.
Post, Frank Anson,	Arkansas City.
Rothrock, Wilburn Joseph,	Lawrence.
Royal, Claude Vivian,	Oatville.
Rundle, Albert,	Clay Center.
Schoeler, Ernest Andrew,	Wamego.
Sellards, Mamie Watson,	Scranton.
Shepard, John Wesley,	Burlington.
Shinn, Lue Abbie,	Greenleaf.
Simpson, Lacey Moore,	McPherson.
Smith, Zillah Merriam,	Lawrence.
Stafford, Orin Fletcher,	Altoona.
Taylor, Satie,	Alton.
Van Fleet, Elma Marie,	Kingman.
Vickers, Adah Maude,	Paola.
Wagstaff, May Belle,	Lawrence.
Warkentin, Edna Wella,	Newton.
Wemple, Flint Lee,	Topeka.

Wick, Clement Carlisle,	New Chillicothe.
Wolfe, Mabel Harriett,	Frankfort.
Wood, William Wright,	White City.

Juniors, 74.

SOPHOMORES:

Alford, Anna Mary,	Lawrence.
Aten, Stella Wolcott,	Hiawatha.
Bailey, Herbert Stevens,	Lawrence.
Baker, Adele,	Hiawatha.
Baker, Franklin,	Lawrence.
Barnett, Alfred Greenleaf,	Kansas City.
Barth, Lillian Aquilla,	Leavenworth.
Bell, Mary Lillian,	Girard.
Best, Maude Lucile,	Centralia.
Billings, Arthur Louis,	Cherryvale.
Blair, Helen,	Lawrence.
Brewster, Helen Barten,	Pleasanton.
Brookover, Dollie Hortense,	Eureka.
Brown, Mary Ripley,	Lawrence.
Bullene, Fredericka Devereaux,	Lawrence.
Bunker, Marjorie C.,	Hutchinson,
Cochran, Madge,	Peabody.
Cooley, Walter D.,	Wichita.
Curry, James William,	Lawrence.
Dale, Mabel Jane,	Belleville.
David, Marguerite,	Lawrence.
Davison, George Mark,	Wichita.
Dillon, Arthur,	Eureka.
Douthart, Eva,	Lawrence.
Drake, Nina Arizina,	<i>Kansas City, Mo.</i>
Ellsworth, Margaret Jane,	Cherryvale.
Elmore, Nellie Munich,	Harper.
Erwin, Margaret Ellen,	Chapman.
Filkin, Walter Warren,	Rosedale.
Gray, Franklin Abe,	Phillipsburg.
Gregg, Mabel,	Lawrence.
Hall, Augusta Ernestine,	Lawrence.
Hall, John Austin,	La Cygne.
Hamill, Bertrand Dewey,	Wakarusa.
Hartman, Mary Seloma,	Carbondale.
Havens, Lou,	Minneapolis.
Helwig, Mary Elizabeth,	Kansas City.
Herr, Alverna Martha,	Wamego.
Herrington, Florence Elizabeth,	Lawrence.
Hill, Arthur,	Lawrence.
Hodgdon, Maud Edith,	Lyons.
Ide, Fred Waterman,	<i>Creston, Iowa.</i>
Irwin, Alice Chloe,	Lawrence.

Irwin, Edith Lilia,	Lawrence.
Johnston, Marshall D.,	Arkansas City.
Kennedy, Elwood Horace,	Wakarusa.
King, Jefferson Perry,	Lawrence.
Leach, Minnie Luella,	Leavenworth.
Leonard, Howard Chase,	Girard.
Miller, Harry Lloyd,	Perry.
Mize, Chester Louis,	Atchison.
Montgomery, Florence Mabel,	Troy.
Moore, Blaine Free,	Cherryvale.
Moore, Louise Jane,	Washington.
McCroskey, Orrell Emma,	Peabody.
McShea, Earl,	Chapman.
McWilliams, Thomas Rutherford,	Lawrence.
Norris, Frances Helen,	Iola.
O'Keefe, Elizabeth Genevieve,	Leavenworth.
Perkins, Edward Otis,	Lawrence.
Poorman, Hoyt Alvie,	Junction City.
Porter, Florence E.,	Kansas City.
Pyle, Effie B.,	Haviland.
Rees, Orton Tilden,	Sabetha.
Riddle, Mary E.,	Lawrence.
Rinehart, Zoe,	Wamego.
Roberts, Beulah Statira,	Osawatomie.
Ronnebaum, Henry John,	Seneca.
Russell, Rusel Coe,	Great Bend.
Sellards, Clara,	Scranton.
Sellards, Elizabeth Mattie,	Lawrence.
Sellards, Gertrude,	Lawrence.
Shaler, Millard King,	Lawrence.
Sharrard, George M.,	Atchison.
Souder, Daisy,	Newton.
Spaulding, Alice Josephine,	Lawrence.
Stafford, Mabel Kurtz,	Altoona.
Storm, Effie Elizabeth,	Frankfort.
Tangeman, Harry Harmon,	Newton.
Taylor, Charles Ellis,	Lawrence.
T'Miller, Eleanor,	Hiawatha.
Tompkins, Harvey Melvin,	Oskaloosa.
Trosper, Robert Elijah, jr.,	Frankfort.
Turner, Katie Hester,	Lawrence.
Unwerth, Erdmuthe Marie von,	<i>Kansas City, Mo.</i>
Welsh, Burt Watson,	Newton.
Wheeler, Mrs. Mabel Ranney,	Pittsburg.
White, Anna Dorris,	Delphos.
Wickham, Florence,	Sabetha.
Willett, Etta Lydia,	Lawrence.

Willett, Mabel Eleanor,	Lawrence.
Wilson, Esther Mary,	Lawrence.

Sophomores, 92.

FRESHMEN.

Abel, Rosa,	Salina.
Albert, Frances Leona,	Lawrence.
Allen, Ellen,	Topeka.
Anderson, John Bodley,	Chetopa.
Anderson, Marian Josepha,	Chetopa.
Ayres, Fred Horace,	Scandia.
Ayres, Bessie Perry,	Lawrence.
Babcock, Seth,	Minneapolis.
Baldwin, John Paul,	Eureka.
Ballard, Calvin H.,	Winfield.
Barcus, George Leslie,	Emporia.
Barnett, Fred Eastes,	Goodland.
Baxter, Leroy Worth,	Columbus.
Beck, Araminta Gentry,	Wamego.
Billingsley, Mary Prudence,	Belleville.
Blackman, Maulsby Willett,	Lawrence.
Bliss, Philemon Preston,	Hiawatha.
Blood, Archie Lovell,	Kansas City.
Blue, Mary Elizabeth,	Rexford.
Bowen, Louis Herbert,	Independence.
Bowersock, Mary Gower,	Lawrence.
Bradford, Robert Hazlett,	El Dorado.
Briggs, Arthur Elbert,	Idenbro.
Brobst, Eva May,	Stockton.
Burnett, Agnes,	Wakefield.
Burns, Lillie,	Lawrence.
Cain, May,	White Cloud.
Carpenter, Charles Ernest,	Wellsville.
Champlin, Roy Frank,	McPherson.
Chapman, Inez Maude,	Seneca.
Chappell, Gilford Arthur,	<i>Newkirk, Okl.</i>
Cloud, Riley Ransom,	Kiowa.
Cockins, Will W., jr.,	Lawrence.
Collins, Myrtle,	Sabetha.
Conboy, Mabel,	Hays City.
Constable, Pearl,	<i>Kansas City, Mo.</i>
Cook, George Lee,	Blue Rapids.
Cooper, Archie,	Beloit.
Corwin, Thomas Montgomery,	Topeka.
Cory, Alice,	<i>Drexel, Mo.</i>
Courtright, John Ernest,	Independence.
Craig, Victor DeKalb,	Randall,
Crofoot, Ira Davis,	Wilson.
Cross, Blanche Lucile,	Neodesha.

Cross, Roy Marion,	Neodesha.
Curry, Alice Sarah,	Nortonville.
Davies, Charles Leland,	Kansas City.
Davis, Dollie Eleanor,	Abilene.
Davis, Lena Margaret,	Lawrence.
Davis, Rowena Mabel,	Garnett.
Ellsworth, Grace Evelyn,	Coffeyville.
Emery, Rufus Marion,	Seneca.
Ewing, Ruth Stevenson,	Iola.
Fife, Raleigh Oscar,	Kansas City.
Fisher, Charles Edward,	Lyons.
Fisk, Mary Stella,	<i>Pleasant Lake, Ind.</i>
Flersheim, Emma Ada,	<i>Kansas City, Mo.</i>
Foster, George Otis,	Garnett.
Frebert, Fred William,	Lawrence.
Frizzell, Beulah Mary,	Halstead.
Frizzell, Julia Winifred,	Halstead.
Gaskill, Harry Andrew,	Ottawa.
Gernon, Lizzie Josephine,	Russell.
Gernon, Mary Kathleen,	Russell.
Gernon, Michael Joseph,	Russell.
Giles, Ethel Margaret,	Abilene.
Gille, Emma Elizabeth H.,	Kansas City.
Gray, Charles Harmon,	Phillipsburg.
Griggs, Lulu Marguerite,	Lawrence.
Groves, Clyde,	Ocheltree.
Hafer, Bessie Bell,	Fort Scott.
Haggart, Daniel Gillis,	Topeka.
Halderman, Charles Walker,	<i>Burchard, Neb.</i>
Hall, Jesse Abraham,	Easton.
Hall, Orville Dwight,	Lawrence.
Harbaugh, Charles Arthur,	Winfield.
Hargraves, Richard Theodore,	Topeka.
Harmon, Jennie,	Lawrence.
Harris, Edward Amos,	<i>Meridian, Miss.</i>
Harris, Arthur James,	Lecompton.
Harshberger, Guy,	Lawrence.
Hay, James Eli,	Burlington.
Hayden, Charles Sydney,	Holton.
Hayden, John Gardner,	Holton.
Haynes, Louise Mabel,	Leavenworth.
Hedger, Florence Amanda,	Iola.
Hindman, Clarence James,	Olathe.
Hirschler, Edmund John,	Hillsboro.
Holaday, Guy Victor,	Lawrence.
Holliday, Frank Mortimer,	Newton.
Hood, George Wilson,	Columbus.

Hooper, Thomas Henry,	Lebanon.
Hoyt, Raymond Dudley,	<i>Cambridge, N. Y.</i>
Hughes, Samuel,	Hutchinson.
Humphrey, Lyman Leonard,	Independence.
Huntley, Mabelle Elizabeth,	Lawrence.
Huntley, Mary Edna,	Lawrence.
Hutchings, Samuel Dean,	Kansas City.
Isaacson, Charles Malcomb,	Seneca.
Johnson, Belle A.,	Winfield.
Johnson, Will Garfield,	Oskaloosa.
Jones, Bertha Anna,	Pleasanton.
Jones, Charles Francis,	Coffeyville.
Jones, Neil Skillman,	Chanute.
Kelley, Daisy Maude,	Frankfort.
Kelley, Elmer Willard,	Frankfort.
Kendall, Ben,	Beloit.
Kilbourne, Burton Kane,	Minneapolis.
Kimble, Olin Arvin,	Carbondale.
Knight, Lucile Josephine,	Beloit.
Lander, Robert Charles,	Humboldt.
Lasley, Myrtle,	Kansas City.
Lauer, Howard Walter,	Hutchinson.
Lees, Anna Scott,	Howard.
Leslie, Loren,	Hutchinson.
Lichti, Otto,	Moundridge.
Light, Adda Anna,	Chapman.
Light, Mae Betsie,	Lawrence.
Lindas, Edward Stark,	Pawnee Rock.
Livers, William Henry,	Mankato.
Logan, Kirk Harold,	Cherryvale.
Lorimer, John Scott,	Morse.
Lucas, George Carroll,	Emporia.
Maggard, Delano Irvin,	Oxford.
Manley, Nettie Ermina,	Junction City.
Mason, Coral Elizabeth,	Ottawa.
Meek, Walter Joseph,	Abilene.
Miller, Bessie Eunice,	Lawrence.
Mills, Clarence Mansfield,	Irving.
Moore, John Clark,	Burrton.
Morgan, Gladys Franc,	Lawrence.
McKee, Clara Frances,	Edmond.
McKeever, Harry Sunshine,	Valley Falls.
McKowen, Oliver,	Wellington.
McNair, Claudia Estella,	Lawrence.
McMath, Edgar Harold,	Lawrence.
Nichols, J. Clyde,	Olathe.
Nichols, Mira Alida,	Horton.

Nickles, Jennie E.,	Hays City.
O'Keefe, James John,	Dafer.
Olds, Frankie Blanche,	Lawrence.
Osborne, Louie John,	Peabody.
Overmyer, George Edward,	Topeka.
Owens, Alpha Loretta,	Lawrence.
Owens, Eugene Herbert,	Lawrence.
Pampel, Heber Davis,	Centralia.
Peace, Larry M.,	Independence.
Peck, Cora M.,	Sabetha.
Perkins, Edith,	Manhattan.
Perkins, Eleanor,	Manhattan.
Peters, Iva Hindo,	Lawrence.
Phillips, Fletcher Max,	Lawrence.
Piatt, Eugenie de Valcourt,	Lawrence.
Pierson, Jesse Verne,	Frankfort.
Pilcher, Edith Blanche,	Olathe.
Pittinger, Martha Elizabeth,	Lawrence.
Post, Allen Jacob,	Phillipsburg.
Pugh, Rachel,	Independence.
Pyle, Nell Josephine,	Haviland.
Ramsey, Jay James,*	Chanute.
Reece, Carrie Alice,	Arkansas City.
Renn, Eliza Lulu,	Wellington.
Renn, Walter B.,	Wellington.
Reynolds, William Wall Aylesworth,	Clay Center.
Root, Metta,	Girard.
Sanborn, Clarence,	Girard.
Sanborn, Emmerson,	Girard.
Saum, Ralph Haley,	Wa Keeney.
Sayre, Will Platt,	Lawrence.
Schaich, Emma S.,	Kansas City.
Schroder, John,	Clay Center.
Sexton, Alice May,	Minneapolis.
Shane, Myrtle Ora,	Lawrence.
Sheffield, Raymond Melville,	Marysville.
Shideler, Daniel Wilkins,	Mineral.
Simpson, Stuart,	McPherson.
Sinnott, Zoe Virginia,	Oswego.
Slocombe, Fanny Caroline,	Peabody.
Smith, Frank Herron,	Lawrence.
Smith, Mary Ladd,	Lawrence.
Smith, Matthew Allen,	Cawker City.
Smith, Rollin,	Columbus.
Smothers, Kitty, *	Lawrence.
Spain. Clifford Robert,	Beloit.

* Deceased.

Spencer, Mary,	Lawrence.
Stauffer, Thaddeus Stevens,	Columbus.
Stem, Ida Emma,	Leavenworth.
Stewart, John May,	Kansas City.
Strope, Leola,	Columbus.
Studebaker, Joseph Ellsworth,	Mont Ida.
Sutton, Walter Stanborough,	Kansas City.
Swan, Leroy,	Coffeyville.
Swan, Rhoda,	Coffeyville.
Sydal, Charles Edwin,	Winfield.
Thomas, George Morris,	Marion.
Thompson, Frank Wesley,	Kansas City.
Thompson, Margaret,	Parsons.
Tilford, James Floyd,	Olathe.
Vandruff, Lucius M.,	Valley Falls.
Van Petten Alfred Emery,	Burlingame.
Warfield, Anna Elizabeth,	Abilene.
Weber, Lila Lang,	Osawatomie.
Weise, Ernest Fred,	Lawrence.
Whiteford, Lillie,	Osawatomie.
Whitney, John Arthur,	Lawrence.
Williams, William Edwin,	Lawrence.
Withington, Wilfred,	Humboldt.
Wolcott, Guy Edward,	Tonganoxie.
Wolfe, Hattie Alena,	<i>Angola, Ind.</i>
Wolfe, Roy Dwain,	<i>Parkville, Mo.</i>
Wood, George Gerhart,	Eureka.
Worley, Albert Harrison,	<i>Odessa, Mo.</i>
Worley, John Reeves,	Osawatomie.

Freshmen, 213.

SPECIALS.

Abel, Anthony,	Salina.
Anderson, Roland Max,	Beloit.
Annan, Harry C.,	Beloit.
Asher, Olive Mae,	Augusta.
Barnett, Grace Buchanan,	Goodland.
Barrow, James S.,	Ellinwood.
Barteldes, Erna,	Lawrence.
Benest, Irvin Frederick,	Severy.
Boughton, Gertrude Helen,	Lawrence.
Brown, George Tilden,	Cherokee.
Brown, Margaret,	Lawrence.
Burress, James Homer,	Williamsburg.
Carey, Gail,	Garnett.
Cary, Harvey Myers,	Lawrence.
Cochran, Forest C.,	Plainville.
Coleman, Alice,	Lawrence.
Collins, John Milton,	Washington.

Connely, Jessamine,	Kansas City.
Crandall, Aretas Elden,	Jewell City.
Cunningham, Walter Milburn,	Beloit.
Dana, Della,	Ottawa.
Dannevik, Alden,	Moray.
Dedrick, William Milner,	Oxford.
Dickinson, Walter Huston,	Everest.
Elliott, Sherman Grant,	Mayetta.
Ellis, Ralph Waldo,	Pratt.
Fassett, Alfred Barker,	<i>Cambridge, N. Y.</i>
Featherkile, Daniel Webster,	Florence.
Field, Robert Stillman,	Medicine Lodge.
Fox, Jennie Elizabeth,	Russell.
Frazer, Della Stuart,	Lawrence.
Freyschlag, Norma,	<i>Kansas City, Mo.</i>
Gardner, Daisy,	Fort Scott.
Garrison, Charles William,	Garnett.
Gavin, Wyn Wasson,	Beloit.
Gille, Georgia Bell,	Kansas City.
Griesa, Mabel,	Lawrence.
Hawk, Florence Edna,	Abilene.
Hayes, Edgar Burnett,	Parsons.
Hayes, Stella Harriett,	Lawrence.
Healy, Martha Matilda,	Lawrence.
Heinecke, Anna Pearl,	Jewell City.
Holaday, Blanche,	Lawrence.
Hooper, Mrs. Thomas H.,	Lawrence.
Hull, Mrs. June Madison,	Lawrence.
Hull, Marc Robert,	<i>Carthage, Mo.</i>
Jenkinson, Julian,	Gaylord.
Johnson, Samuel Adams,	Horton.
Kane, Margaret,	Greensburg.
Katherman, Ida May,	Lawrence.
Kleinknecht, Helen,	Newton.
Leslie, Elizabeth,	Lawrence.
Lewis, John Paul,	Great Bend.
Lichtenwalter, Geneve,	Lawrence.
Luther, Winnifred,	Lawrence.
Miles, Harriette,	Lawrence.
Miller, Bertha Maie,	Elk City.
Mitchner, Wm. Forrest,	Newton.
Montgomery, Royal John,	Smith Center.
McCormick, Bertha Maude,	Cherryvale.
McCullough, Mary,	Wichita.
Nelson, Marie,	<i>Kansas City, Mo.</i>
Nicholson, George Miller,	<i>Kansas City, Mo.</i>
O'Keefe, Helen,	Lawrence.

Parks, Wade Roscoe,	Bonita.
Peterson, Charles Harry,	Enterprise
Porter, Lizzie,	Lawrence.
Reitz, Milton Franklin,	Topeka.
Renn, Dora,	Wellington.
Robinson, Amber,	Lawrence.
Rumold, Christian Ferdinand,	Dillon.
Scammon, Mary Hopkins,	Cherokee.
Shane, Vera Marion,	Lawrence.
Sheldon, Miriam,	Topeka.
Shive, Eads Edison,	Patterson.
Simons, J. Grace R.,	Lawrence.
Smith, Ralph W.,	Florence.
Smith, Rose Ella,	Lawrence.
Speak, Fred,	Kansas City.
Spencer, Daniel Hooker,	Lawrence.
Spohn, Mrs. June H.,	Linn.
Stewart, Will J.,	Topeka.
Sump, Otto,	Randolph.
Torrance, James H.,	Ellinwood.
Tucker, George Elmer,	Cawker City.
Van Scoyoc, Charles Warren,	Le Loup.
Warkentin, Bernhard,	Newton.
Weeks, Ella,	Lincoln Center.
Whitaker, Charles Thomas,	Edgerton.
Whitney, Will Russell,	Garnett.
Wiedemann, Louise Augusta,	Lawrence.
Williams, Edna,	Ottawa.
Wolfe, Burton Lee,	Reno.
Woodin, Lucy,	Lawrence.
Woodin, May Mariah,	Lawrence.

Specials, 95.

PREPARATORY MEDICAL.

Bennett, Nathan George,	Greensburg.
Chilcott, William,	Mankato.
Duncan, Thomas,	Lawrence.
Hamer, Edward Thompson,	Lawrence.
Wilson, James Embry,	Garnett.

Preparatory Medical, 5.

School of Engineering.

SENIORS.

Alexander, James Richard, C. E.,	<i>Kansas City, Mo.</i>
Drysdale, James Murray, E. E.,	Greensburg.
Fiester, Cecil Beaumont, E. E.,	Whiting.
Fletcher, John Herbert, C. E.,	Fort Scott.
Griggs, Sidney Wesley, C. E.,	Lawrence.
Kasano, Hubert Yeizo, C. E.,	<i>Tokyo, Japan.</i>
Matthews, Fred Elwood, E. E.,	Lawrence.

Seniors, 7.

JUNIORS.

Avery, Herbert Charles, C. E.,	Dodge City.
Beaman, Jay Foster, C. E.,	Alden.
Dewey, Ernest Kirk, E. E.,	Farlinville.
Duer, Harry Eldon, E. E.,	Arkansas City.
Funk, Ambrose C., E. E.,	<i>Palm, Pa.</i>
Maxwell, Howard, E. E.,	Morrill.
Reece, Charles Alfred, E. E.,	White Cloud.
Silver, Lon Vale, E. E.,	Morganville.
Wickstrum, Cecil M., E. E.,	Clay Center.
Yahn, William Fred, E. E.,	Lawrence.

Juniors, 10.

SOPHOMORES.

Andrews, Walter Howard, E. E.,	Kansas City.
Baker, Orth Kitchell, E. E.,	Mound Valley.
Cowdry, Clarence Eugene, E. E.,	Seneca.
Edson, James Oliver, E. E.,	Olathe.
Flickinger, John Tressler, E. E.,	Plymouth.
Fullenwider, Charles Munsell, E. E.,	El Dorado.
Harrison, John Wendell, C. E.,	Lawrence.
Hood, George Jusser, E. E.,	Clay Center.
Johnson, Fred, E. E.,	Leavenworth.
Mason, Lynne Emerson, E. E.,	Lawrence.
Riedy, Anthony Daney, E. E.,	Ottawa.
Ruth, Abraham John, C. E.,	Moundridge.
Shipman, Harry Lee, E. E.,	Lawrence.
Thatcher, Reno Eddy, E. E.,	Great Bend.
Unwerth, Herman von, E. E.,	<i>Kansas City, Mo.</i>
Walling, Victor Roy, E. E.,	Lawrence.
Yale, Jed Rial, E. E.,	Belleville.

Sophomores, 17.

FRESHMEN.

Bates, Fred John, E. E.,	Marysville.
Bernhard, Bernice J., E. E.,	Kansas City.
Blanchard, Milton Clark, C. E.,	Hamlin.
Bradley, Arthur Clark, C. E.,	Stockton.
Bushby, Floyd Milton, E. E.,	Scandia.

Camp, John Roland, E. E.,	Wellington.
Carter, Edwin Albert, C. E.,	Lawrence.
Chestnut, Charles William, E. E.,	Osawatomie.
Clark, Alvin John, E. E.,	Frankfort.
Clark, Guy Fulton, E. E.,	Caldwell.
Collins, Earl Davis, E. E.,	Harper.
Council, Don, E. E.,	Augusta.
Crawford, Amos, C. E.,	Columbus.
Crawford, Loyal Folliard, E. E.,	Girard.
Dallas, Jerome Lewis, E. E.,	El Dorado.
Dent, Roy Fogle, E. E.,	Olathe.
Devlin, John A., Chem. E.,	Newton.
Devereux, Edward Clifton, C. E.,	Lawrence.
Duigenan, Charles, E. E.,	Marysville.
Fees, Charles Andrew, E. E.,	Wichita.
Gerteis, Henry, E. E.,	Derby.
Hall, Walter Steighley, E. E.,	Lawrence.
Hamilton, Roy Edward, E. E.,	Harper.
Heinecke, Charles Walter, E. E.,	Jewell City.
Henley, Roy Albert, E. E.,	Lawrence.
Hahn, Emil August, E. E.,	Marysville.
Jensen, Hans, E. E.,	Hays City.
Jones, Corra Chester, E. E.,	Humboldt.
Kellogg, Scott Perry, C. E.,	Leavenworth.
Landes, George Albert, E. E.,	Arkansas City.
Lieberman, Jerome Sydney, C. E.,	<i>Kansas City, Mo.</i>
Light, Vaughn, C. E.,	Chanute.
Lindsly, Albert Joseph, C. E.,	<i>Kansas City, Mo.</i>
Little, John T., jr., E. E.,	Olathe.
Marcy, Frank Earl, Chem. E.,	Lawrence.
Moore, Clyde W., E. E.,	Great Bend.
Murphy, Will Richard, C. E. and E. E.,	<i>Las Animas, Col.</i>
McCarthy, Patrick James, C. E.,	Hays City.
McCasky, Charles Irving, C. E.,	Fort Leavenworth.
McGillivray, Norman MacLeod, C. E.,	Frankfort.
McKnight, James Rankin, C. E.,	Junction City.
McMath, Carrol Barton, E. E.,	Fort Scott.
Nichols, Fred Augustus,	Horton.
Owens, Fred William, E. E.,	Lawrence.
Pampel, Heber David, E. E.,	Centralia.
Pedigo, Walter, E. E.,	Pratt.
Pellett, James Sutton, C. E.,	Olathe.
Penley, Walter Albert, E. E.,	Gordon.
Porter, Fred Baker, E. E.,	Lawrence.
Priestly, James A., E. E.,	Lawrence.
Rankin, Carl, E. E.,	Lawrence.
Rhodes, John Jacob, E. E.,	Colony.
Robbins, Will Albert, E. E.,	Colby.

Sawtell, Loring E., E. E.,	Peabody.
Sawyer, Edwin Barker, E. E.,	Haven.
Schlegel, Charles, Chem. E.,	Topeka.
Shepard, Edward, E. E.,	Winfield.
Spiers, Arthur C., E. E.,	Lawrence.
Stevenson, Charles Richard, E. E.,	Waterville.
Taylor, Melvin H., E. E.,	Lyons.
Tobey, Will Henderson, E. E.,	Washington.
Wallace, Floyd Eldridge, E. E.,	McPherson.
Ward, Guy, E. E.,	Belleville.
Watson, John Samuel, E. E.,	Peabody.

Freshmen, 64.

SPECIALS.

Algie, John, E. E.,	Washington.
Anderson, Paul, E. E.,	Stanton.
Bailey, Herbert Stevens, C. E.,	Lawrence.
Battey, Paul Leon, E. E.,	Topeka.
Bower, Carl, E. E.,	Eureka.
Cluster, Burt, E. E.,	Jewell City.
Dennis, Walter, E. E.,	Kansas City.
Frisbie, Elton Fred, E. E.,	Plainville.
Gibson, Howard Will, E. E.,	Kansas City.
Kreamer, Harvey, C. E.,	Jewell City.
Selig, Ernest Theodore, E. E.,	Lawrence.
Stewart, Will James, E. E.,	Topeka.
Stone, Fred, E. E.,	Florence.
Trueblood, Ervin Earl, C. E.,	Lawrence.

Specials, 14.

School of Pharmacy.

SENIORS.

Allen, Roy Eugene,	Wichita.
Bardrick, George Homer,	Miltonvale.
Carter, Albert Bovard,	Hollis.
Crawford, Georgia Imogene,	Girard.
Hartigan, William Henry,	Horton.
Hess, Harrison Henry,	Wichita.
Higginson, Henry Dwight,	Wichita.
Hoyt, Raymond,	Lawrence.
Jones, Felix Grant,	Leoti.
Lauck, Allan Abbott,	Topeka.
Lewis, Olive St. Claire,	Topeka.
Marsh, Ray Eugene,	Fort Scott.
Newlin, Mahlon Ernest,	Lawrence.
Packer, Ella Pearl,	Osage City.
Smith, Russell Maurice,	Russell.
Swayze, Jason Clarke,	Topeka.

Waldo, George Lyons,	Burlingame.
Wheeler, Earl Ralph,	Lakin.
Wilson, Della May,	Atchison.
Yielding, Charles W.,	Chase.

Seniors, 20.

JUNIORS.

Aherne, Philip, jr.,	Wichita.
Beach, Mark,	Lawrence.
Bennett, Mabel Jean,	Greensburg.
Bertholf, Charles Merrill,	Cherokee.
Bloom, Elmer Elias,	Pawnee Rock.
Butler, Ella Beatrice,	Hutchinson.
Carle, Leslie,	Topeka.
Case, Arthur Stanley,	Fredonia.
Cross, Guy Berry,	<i>De Witt, Neb.</i>
Crow, Lysle,	Pratt.
Lodge, Lyman J.,	Great Bend.
Fleming, John,	Soldier.
Fogwell, Frank Will,	Grand Haven.
Forney, George Emery,	Hutchinson.
Hamilton, John Joseph,	Independence.
Henry, Wm. Erwin,	Independence.
Hill, Earl,	Ottawa.
Latta, James Mair,	Wilson.
Lyon, Fred. B.,	Lyons.
Nicol, John William,	Simpson.
Owen, Benjamin,	Guelph.
Reese, John Clark,	Newton.
Sanderson, Jessie Wallace,	Lawrence.
Smith, Hunt Owen,	Topeka.
Strait, Augusta De Francia,	Topeka.
Summers, Frank Garfield,	Eureka.
Sweet, Eugene Alpheus,	Delphos.
Taneyhill, Thomas Robert,	Caney.
Trent, Amos Lawrence,	<i>St. Joseph, Mo.</i>
Wickliffe, Ralph,	Arkansas City.
Wolcott, George William,	Russell.
Woodward, David,	Patterson.

Juniors, 32.

SPECIALS.

Dieter, John Nichols,	Oak Hill.
Guthrie, George Frederick,	Kingman.
Holliday, Rufus Brooks,	Coffeyville.
Kenyon, Ernest Loughry,	Lawrence.
Loewe, Louis Jacob,	Arlington.
Malcolm, Charles Calvin,	Oak Hill.
Sams, Walter Burton,	Centralia.
Sinclair, Harry Ford,	Independence.
Strauss, Arthur Gill,	Leavenworth.

Specials, 9.

School of Law.

SENIORS.

Andrews, Bertram Daniel,	Arkansas City.
Antrobus, Thomas Hamilton,	Beloit.
Beck, Frank Clifford,	Topeka.
Benson, Edward Henry,	Belleville.
Blair, David Ellmore,	Salina.
Blochberger, Carl,	Leavenworth.
Bowes, Will,	Wamego.
Brady, Thomas Maher,	Chetopa.
Brady, Edward Hughes,	Chetopa.
Bunten, James Muir,	Scranton.
Burke, Wand Dee,	Fort Scott.
Butler, Timothy John,	Glasco.
Buttomer, John C.,	Olathe.
Carter, Owen,	Kansas City.
Chamberlain, Frank Henry,	Topeka.
Clingman, Ord C.,	Cawker City.
Collins, John Milton,	Washington.
Courtright, Percy Leroy,	Independence.
Davis, Clarence,	Stockton.
Crosswhite, Benjamin J. D.,	Parker.
Decker, Perl D.,	Hollis.
Field, Seward Irving,	Medicine Lodge.
Frye, Charles Willett,	Lawrence.
Gibbs, Harley Clifford,	Colony.
Greene, Arthur Albert,	Lecompton.
Hamer, Daniel W.,	Madison.
Harrison, John William,	Topeka.
Herndon, Tom,	<i>St. Jo, Tex.</i>
House, Edwin Luther,	Lawrence.
Howard, Alfred Stevenson,	Baldwin.
Howsley, Robert Lucellus,	Leavenworth.
Hyatt, Catherine Swope,	Altamont.
Hyatt, William Sheridan,	Altamont.
Johnson, Charles William,	Dwight.
Kellar, Edith Nilsson,	Marion.
Kyle, Harry,	La Cygne.
Lane, Oscar Jasper,	Lawrence.
Leland, Edward James,	Ellinwood.
Majors, Alexander Lyman,	Girard.
Meehan, Henry Patrick,	Blaine.
Montgomery, William Henry,	Troy.
Morgan, Milo Edwin,	Lawrence.
Morton, Harry Martyn,	Parsons.

McDonald, Charles Stewart,	Baxter Springs.
McGill, Crandon O.,	Great Bend.
McKeever, Horace Greeley,	Valley Falls.
Posten, Walter,	Netawaka.
Pyle, Etna Maurice,	Haviland.
Rogers, William Howard,	Washington.
Roser, Edward Frederick,	Leavenworth.
Rumold, Christian Ferdinand,	Dillon.
Sample, Edwin Parker,	Downs.
Sample, Robert, jr.,	Toronto.
Sellards, Cora Kirby,	Lawrence.
Smith, Thomas Davenport,	Hiawatha.
Somerville, Jay Wilbur,	Lawrence.
Spohn, Leon Herbert,	Linn.
Stanley, William H.,	Lawrence.
Uhl, Leonard Charles, jr.,	Smith Center.
Vale, Franklin Ernest,	Attica.
Von Trebra, Walter Anton,	Chetopa.
Watteville, Charles De,	Lawrence.
Weilep, Franklin John,	Galena.
Weingartner, Henry,	Topeka.
Williams, Arthur R.,	Lawrence.
Williams, Willis Irwin,	Lawrence.
Wood, Fred Hill,	<i>Kansas City, Mo.</i>
Woodward, John Angus,	Salina.
Wright, George Goodson,	Norborne.

Seniors, 69.

JUNIORS.

Abel, Anthony,	Salina.
Anderson, Frank Elmer,	Lawrence.
Anderson, Jay Albert,	Preston.
Anderson, Roland Max,	Beloit.
Anderson, Walter Herbert,	Lincoln.
Attaway, Allen Henry,	Lawrence.
Barnett, Grace Buchanan,	Goodland.
Barrow, James Stephen,	Ellinwood.
Baxter, Charles,	Willis.
Burton, Fernand Augustus,	<i>Ponca City, Okl.</i>
Carroll, Edwin Earl,	Lawrence.
Casey, Margaret Elizabeth,	Topeka.
Cochran, Forest Carle,	Plainville.
Cooksey, Charles Rivers,	Washington.
Crabtree, Frank Eugene,	Scott City.
Dail, Charles Darwin,	Kansas City.
Dannevik, Alden,	Moray.
Davis, George Lovett,	Spring Hill.
Dedrick, William Milner,	Oxford.
Dinsmoor, Paul Addison,	Lawrence.

Earhart, Emory W.,	Oxford.
Elliott, Philip Sheridan,	Mayetta.
Elliott, Sherman Grant,	Mayetta.
Else, Nathaniel Charles,	Haddam.
Etechells, Peter Miller,	Lawrence.
Field, Robert Stillman,	Medicine Lodge.
Field, Russell Willard,	Solomon.
Fletcher, Edmond Carl,	Stanley.
Gant, Cornelius,	Leavenworth.
Garrison, Cora Charles,	Garnett.
George, Waites Maurice,	Smith Center.
Hamilton, Hale Rice,	Topeka.
Harwood, William Tecumseh,	Kingman.
Hayson, John William,	Burlingame.
Hess, William B.,	Pratt.
Hetzer, Albert Rufus,	Boicourt.
Hetzer, Thomas Walter,	Boicourt.
Johnston, John Junius,	Kipp.
Jones, Walter Cassius,	Iola.
Jordaan, Walter Vandenham,	Larned.
Kane, John Henry,	Greensburg.
Karr, Earnest Day,	Topeka.
Karr, Thomas Jefferson,	McCune.
Landers, Robert,	Farlington.
Lenau, Charles William,	Gaylord.
Lewis, John Paul,	Great Bend.
Lockwood, Ernest Christie,	Claffin.
Lyons, Leslie James,	Olathe.
Martindale, Edgar,	Lawrence.
Miller, James Monroe,	Stockton.
Miller, John Reuben,	Beloit.
Murphy, Maurice,	Lawrence.
Myers, Willis Lewis,	El Dorado.
McKenna, Lawrence Walter,	Kingman.
Osborne, Curtis Andrew,	Frankfort.
Osborn, Roy Thornton,	Salina.
Overlander, Jacob Alpheus,	Leona.
Parent, Frank Dyal,	Abilene.
Patterson, Adam Edward,	Kansas City.
Powell, Charles Heath,	Sterling.
Reid, Frank Archibald,	Clyde.
Reynolds, Willard,	Island.
Rice, Leroy Field,	Concordia.
Riling, Edward Thomas,	Worden.
Robitaille, Ernest,	Lawrence.
Rochester, Ernest Paul,	Scott City.
Scott, Charles Elmer,	Atwood.

Smith, Ralph W.,	Florence.
Starr, Carl Mike,	Scott City.
Steele, Mrs. May Lower,	Lawrence,
Steele, Will Graham,	Lawrence.
Stewart, Harold McCullough,	Waverly.
Sump, Otto,	Randolph.
Taylor, Polk,	Emporia.
Tipton, Frank Marion,	Topeka.
Torrance, James Howard,	Ellinwood.
Trosper, Robert Elijah,	Frankfort.
Vandal, James,	Lawrence.
Wagner, William Henry,	Jefferson.
Whitaker, Charles Thomas,	Edgerton.
Wilcox, Charles Willis,	Concordia.
Wilson, Robert Peel B.,	Alden.
Wood, David William,	Strong City.
Zwick, William,	Abilene.

SPECIALS.

Juniors, 84.

Cates, Hoite,	Chanute.
Everett, Robert Edward,	Lawrence.
Hoge, Charles Craven,	Olathe.
Moore, Wade Hampton,	Norwood.
Mosse, Arthur St. Leger,	Arkansas City.
McNee, John Duncan,	Cottonwood Falls.
Phillips, Duff Green,	Roland.
Roberts, Campbell Frank,	Topeka.
Sellards, William Jackson,	Scranton.
Springer, Alvin R.,	Manhattan.
Thorp, Claude Marks,	Cawker City.
Watson, Charles Jay,	Overbrook.
Whitney, Will Russell,	Garnett.

Specials, 13.

School of Fine Arts.

GRADUATES.

Brown, Mattie,	Piper.
Fisher, Mabel Amy,	Lawrence.
Ireton, Della Blanche,	Lawrence.
Lichtenwalter, E. Geneve,	Lawrence.
Litchfield, Alice,	Lawrence.
McCheyne, Gertrude,	<i>Kansas City, Mo.</i>
Noyes, Abbie Merriman,	Lawrence.
Simmons, Lillian Belle,	Lawrence.
Smith, Louise,	Lawrence.
Wiedemann, Louise,	Lawrence.
Wilson, Martha E.,	Holton.

Graduates, 11.

SENIORS.

Babcock, Frances Adelaide,	Lawrence.
Gilbert, Thomas Howard,	Haviland.
Merrill, John Jacobs,	<i>Greenfield, Mo.</i>
Rees, Olivia Ellen,	Minneapolis.
Safford, Emma Elizabeth,	Augusta.
Snyder, Maud Lucille,	Lawrence.
Winnek, Alberta,	Lawrence.

Seniors, 7.

JUNIORS.

Brantner, Lena Leota,	Wallula.
Crawford, Nina Ellen,	Girard.
Gowell, Prudentia Browne,	Linwood.
Green, Louise J.,	Lecompton.
Hudson, Elizabeth,	El Dorado.
McClair, Agnes Loretta,	Carbondale.
Nungesser, Ella,	Parker.
Shane, Vera Marion,	Lawrence.
Winter, Clara Sabin,	Yates Center.

Juniors, 9.

SOPHOMORES.

Clarke, Florence Greeley,	Lawrence.
Cook, Maud Beatrice,	Fort Scott.
Davis, Edith Elsie,	Lawrence.
Flintom, Alice Augusta,	Lawrence.
Gilmore, Anna Laura,	Lawrence.
Hart, Lottie Bertina,	Newton.
Hartman, Anna,	Carbondale.
Leedy, Clara Romaine,	Lawrence.
Simmons, Julia Dunbar,	Leavenworth.
Van Cleef, Lucia Evalene,	Seneca.
Wise, Marguerite E.,	Hutchinson.

Sophomores, 11.

FRESHMEN.

Bailey, Mabel,	Chanute.
Barnes, Belle Blake,	Frankfort.
Becker, Gertrude Ada,	Lawrence.
Bond, Rosa,	Lawrence.
Brown, Evangeline H.,	Lawrence.
Connely, Ethel Mae,	Kansas City.
Cross, Lulu Lucy,	Chanute.
Cross, Viah Mae,	Johnson.
Dickinson, Selecta Orlena,	Everest.
Griffin, Olive Mae,	Garnett.
Heinecke, Anna Pearl,	Jewell City.
Hoffman, Hattie,	Leavenworth.
Kinney, Myrtle Levona,	Carbondale.
Light, V. M.,	Chanute.
Miller, Lona,	Perry.

Miller, Tessie May,	El Dorado.
McCormick, Bertha Maude,	Cherryvale.
McCormick, Stella Myrtle,	Cherryvale.
Naylor, Bessie May,	Yates Center.
Parker, Edith Lena,	Minneapolis,
Peak, Lulu May,	McCune.
Stone, Myrtle May,	Caney.

Freshmen, 22.

Summary of Enrollment.

	<i>Men.</i>	<i>Women.</i>	<i>Total.</i>
GRADUATE SCHOOL.....	32	10	42
<i>School of Arts.</i>			
Senior Class.....	52	27	79
Junior Class.....	46	28	74
Sophomore Class.....	36	56	92
Freshman Class.....	128	85	213
First-Year Medical.....	5	.....	5
Special Students.....	48	47	95
Total in School of Arts.....	315	243	558
<i>School of Law.</i>			
Senior Class.....	66	3	69
Junior Class.....	81	3	84
Special Students.....	13	.....	13
Total in School of Law.....	160	6	166
<i>School of Pharmacy.</i>			
Senior Class.....	16	4	20
Junior Class.....	29	3	32
Special Students.....	9	.....	9
Total in School of Pharmacy.....	54	7	61
<i>School of Engineering.</i>			
Senior Class.....	7	.....	7
Junior Class.....	10	.....	10
Sophomore Class.....	17	.....	17
Freshman Class.....	64	.....	64
Special Students.....	14	.....	14
Total in School of Engineering.....	112	.....	112
<i>School of Fine Arts.</i>			
Graduates.....	.....	11	11
Seniors.....	2	5	7
Juniors.....	.....	9	9
Sophomores.....	.....	11	11
Freshmen.....	.....	22	22
Special Students.....	23	93	116
Total in School of Fine Arts.....	25	151	176
Total enrollment in all schools.....	698	417	1,115
Names counted twice.....	24	4	28
Total registration.....	674	413	1,087

In addition, University Extension courses have been conducted by members of the Faculty at the following cities, with the average attendance of citizen students indicated:

	<i>Lecturer.</i>	<i>Attendance.</i>
Lawrence.....	F. H. Hodder.....	140
Topeka.....	A. St. C. Dunstan.....	20

Classification of Students by Kansas Counties.

Allen	10	Marion	15
Anderson	11	Marshall	24
Atchison	4	McPherson	7
Barber	4	Miami	6
Barton	13	Mitchell	14
Bourbon	8	Montgomery	26
Brown	16	Morris	2
Butler	10	Neosho	5
Chase	2	Nemaha	19
Clay	9	Ness	1
Cloud	10	Norton	3
Crawford	18	Osage	19
Cherokee	9	Osborne	3
Coffey	3	Ottawa	9
Cowley	19	Pawnee	2
Decatur	1	Phillips	4
Dickinson	16	Pottawatomie	7
Doniphan	7	Pratt	6
Douglas *	215	Rawlins	1
Elk	1	Reno	11
Ellis	4	Republic	8
Ellsworth	2	Rice	10
Finney	2	Riley	5
Ford	1	Rooks	6
Franklin	11	Russell	7
Geary	5	Saline	8
Greenwood	10	Scott	3
Harper	4	Sedgwick	12
Harvey	19	Shawnee	29
Jackson	10	Sheridan	1
Jefferson	10	Sherman	2
Jewell	8	Smith	6
Johnson	19	Stafford	1
Kearny	1	Stanton	1
Kingman	3	Sumner	12
Kiowa	10	Thomas	2
Labette	15	Trego	2
Lane	1	Washington	12
Leavenworth	22	Wichita	1
Lincoln	2	Wilson	4
Linn	10	Woodson	3
Lyon	4	Wyandotte	27

*A large number of students whose names appear in this catalogue as residents of Douglas county are so catalogued because they temporarily reside in Lawrence for the purpose of attending the University.

Classification by States.

Arkansas	1	Mississippi	1
California	1	Missouri	27
Colorado	2	Montana	1
Idaho	1	Nebraska	5
Illinois	2	New York	2
Indiana	2	Oklahoma territory	3
Iowa	1	Texas	1
Japan	2		
Kansas	905		959
Michigan	2		

The classification by counties and states does not include the special students in the School of Fine Arts.

Growth of the University, 1866-1899.

YEAR.	No. of Faculty	POST-GRADUATES.			SCHOOL OF ARTS.			NORMAL SCHOOL.			LAW SCHOOL.		
		Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...
1866-67.....	4	...	...	...	...	...	...	...	...	...	...	...	...
1867-68.....	7	...	...	...	0	2	2	...	...	...	...	...	...
1868-69.....	8	...	...	...	0	6	6	...	...	...	...	...	...
1869-70.....	8	...	...	...	6	11	17	...	...	...	...	...	...
1870-71.....	9	...	...	...	15	30	45	...	...	...	...	...	...
1871-72.....	10	...	...	...	28	28	56	...	...	...	...	...	...
1872-73.....	11	...	...	...	47	26	73	...	...	...	...	...	...
1873-74.....	11	...	...	...	31	27	58	...	...	...	...	...	...
1874-75.....	10	...	...	...	35	30	65	...	...	...	...	...	...
1875-76.....	11	...	...	...	42	30	72	2	33	35	...	...	...
1876-77.....	13	...	...	...	49	31	80	41	79	120	...	...	...
1877-78.....	12	...	...	...	63	47	110	4	8	12	...	...	...
1878-79.....	14	1	2	3	73	46	119	5	11	16	13	0	13
1879-80.....	16	0	2	2	68	46	114	18	42	60	18	0	18
1880-81.....	16	1	0	1	98	58	156	16	22	38	15	0	15
1881-82.....	18	1	2	3	99	49	148	20	33	53	7	0	7
1882-83.....	18	4	2	6	129	79	208	20	22	42	12	0	12
1883-84.....	19	7	3	10	106	59	165	23	41	64	24	0	24
1884-85.....	21	13	8	21	107	42	149	3	7	10	14	0	14
1885-86.....	24	8	6	14	108	49	157	...	...	*	29	0	29
1886-87.....	27	4	10	14	142	60	202	...	...	...	32	0	38
1887-88.....	31	8	5	13	119	50	169	...	...	...	33	0	33
1888-89.....	32	9	4	13	87	31	118	...	...	...	51	0	51
1889-90.....	33	10	7	17	140	59	199	...	...	...	56	0	56
1890-91.....	36	13	12	25	194	70	264	...	...	...	44	1	45
1891-92.....	44	19	10	29	191	92	283	...	...	...	77	1	78
1892-93.....	45	11	9	20	190	122	312	...	...	...	84	1	85
1893-94.....	50	23	10	33	207	125	332	...	...	...	78	1	79
1894-95.....	52	15	6	21	259	167	426	...	...	...	98	1	99
1895-96.....	52	28	10	38	299	194	493	...	...	...	119	2	121
1896-97.....	56	30	13	43	291	224	515	...	...	...	147	3	150
1897-98.....	57	30	14	44	317	242	559	...	...	...	164	8	172
1898-99.....	69	32	10	42	315	243	558	...	...	...	160	6	166

* Normal department discontinued by act of the legislature.

Growth of the University, 1866-1899—Continued.

YEAR.	No. of Faculty	PHARMACY SCHOOL.			ART SCHOOL.			MUSIC SCHOOL.			SCHOOL OF FINE ARTS.		
		Male ...	Female.	Total...	Male ...	Female.	Total...	Male ...	Female.	Total...	Male ...	Female.	Total...
1866-67.....	4	...	...	...	...	...	...	...	...	...	...	...	...
1867-68.....	7	...	...	...	...	...	...	...	...	...	...	...	...
1868-69.....	8	...	...	...	...	...	...	...	...	...	...	...	...
1869-70.....	8	...	...	...	...	...	...	...	...	...	...	...	...
1870-71.....	9	...	...	...	...	...	...	...	...	...	...	...	...
1871-72.....	10	...	...	...	...	...	...	...	...	...	...	...	...
1872-73.....	11	...	...	...	...	...	...	...	...	...	...	...	...
1873-74.....	11	...	...	...	...	...	...	...	...	...	...	...	...
1874-75.....	10	...	...	...	...	...	...	...	...	...	...	...	...
1875-76.....	11	...	...	...	...	...	...	...	...	...	...	...	...
1876-77.....	13	...	...	...	...	...	...	...	...	...	...	...	...
1877-78.....	12	...	...	...	...	...	...	4	15	19	...	...	...
1878-79.....	14	...	...	...	...	...	...	5	15	20	...	...	...
1879-80.....	16	...	...	...	...	...	...	3	25	28	...	...	...
1880-81.....	16	...	...	...	...	...	...	2	30	32	...	...	...
1881-82.....	18	...	...	...	...	...	...	2	21	23	...	...	...
1882-83.....	18	...	...	...	...	...	...	0	37	37	...	...	...
1883-84.....	19	...	...	...	...	...	...	2	36	38	...	...	...
1884-85.....	21	...	...	...	...	...	...	59	92	151	...	...	...
1885-86.....	24	23	0	23	0	33	33	4	63	47	...	...	...
1886-87.....	27	38	2	40	3	19	22	16	89	105	...	...	...
1887-88.....	31	40	2	42	1	21	22	6	91	97	...	...	...
1888-89.....	32	39	4	43	0	49	49	8	68	76	...	...	...
1889-90.....	33	28	3	31	9	31	40	5	54	59	...	...	...
1890-91.....	36	30	3	33	3	21	24	13	50	63	...	...	...
1891-92.....	44	37	4	41	...	...	*	...	...	*	12	100	112
1892-93.....	45	48	5	53	...	...	...	...	...	...	26	159	185
1893-94.....	50	48	6	54	...	...	...	...	...	...	17	153	170
1894-95.....	52	58	8	66	...	...	...	...	...	...	32	177	209
1895-96.....	52	60	3	63	...	...	...	...	...	...	22	134	156
1896-97.....	56	54	4	58	...	...	...	...	...	...	37	135	172
1897-98.....	57	55	6	61	...	...	...	...	...	...	17	145	162
1898-99.....	69	54	7	61	...	...	...	...	...	...	25	151	176

*At the end of 1890-'91 the Schools of Music and Art were combined.

Growth of the University, 1866-1899—Concluded.

YEAR.	No. of Faculty.....	ENGI-NEERING SCHOOL.			PREPARATORY SCHOOL.			NAMES REPEATED, TO BE DEDUCTED.			TOTAL IN ALL SCHOOLS AFTER DEDUCTIONS.		
		Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...	Male....	Female.	Total...
1866-67.....	4	.....	.....	.....	29	26	55	.....	.....	.....	29	26	55
1867-68.....	7	.....	.....	.....	50	53	103	.....	.....	.....	50	55	105
1868-69.....	8	.....	.....	.....	56	60	116	.....	.....	.....	56	66	122
1869-70.....	8	.....	.....	.....	66	69	135	.....	.....	.....	72	80	152
1870-71.....	9	.....	.....	.....	88	94	182	.....	.....	.....	103	124	227
1871-72.....	10	.....	.....	.....	103	106	209	.....	.....	.....	131	134	265
1872-73.....	11	.....	.....	.....	94	105	199	.....	.....	.....	141	131	272
1873-74.....	11	.....	.....	.....	67	48	115	.....	.....	.....	98	75	173
1874-75.....	10	.....	.....	.....	77	52	129	.....	.....	.....	112	82	194
1875-76.....	11	.....	.....	.....	75	78	153	2	21	23	117	120	237
1876-77.....	13	.....	.....	.....	100	64	164	0	5	5	190	169	359
1877-78.....	12	.....	.....	.....	125	128	253	11	22	33	185	176	361
1878-79.....	14	.....	.....	.....	143	114	257	11	14	25	229	174	403
1879-80.....	16	.....	.....	.....	144	107	251	9	24	33	242	198	440
1880-81.....	16	.....	.....	.....	166	111	277	21	31	52	277	190	467
1881-82.....	18	.....	.....	.....	141	96	237	8	20	28	262	181	443
1882-83.....	18	.....	.....	.....	208	142	350	24	49	73	339	243	582
1883-84.....	19	.....	.....	.....	163	105	268	16	32	46	309	212	*521
1884-85.....	21	.....	.....	.....	144	117	261	63	72	135	277	194	471
1885-86.....	24	.....	.....	.....	90	53	143	4	43	47	258	161	419
1886-87.....	27	.....	.....	.....	99	47	146	18	54	72	316	173	489
1887-88.....	31	.....	.....	.....	110	62	172	11	54	65	306	177	483
1888-89.....	32	.....	.....	.....	146	61	207	8	44	52	332	173	505
1889-90.....	33	.....	.....	.....	90	48	138	6	26	32	332	176	508
1890-91.....	36	.....	.....	.....	27	11	38	8	10	18	316	158	474
1891-92.....	44	88	0	89	.....	.....	†	0	1	1	424	206	630
1892-93.....	45	91	0	91	.....	.....	.....	12	5	17	438	291	729
1893-94.....	50	101	0	101	.....	.....	.....	24	21	45	427	264	691
1894-95.....	52	100	0	100	.....	.....	.....	17	8	25	530	345	875
1895-96.....	52	90	1	91	.....	.....	.....	21	8	29	569	326	895
1896-97.....	56	87	0	87	.....	.....	.....	17	4	21	629	375	1004
1897-98.....	57	95	0	95	.....	.....	.....	25	6	31	653	409	1062
1898-99.....	69	112	0	112	.....	.....	.....	24	4	28	674	413	1087

*This year marks the beginning of the discontinuance of preparatory studies.

†At the end of 1890-'91 the preparatory department was entirely abolished.

Directory of Alumni.

The addresses given below are the latest we have obtained. It is desired that the list shall be as nearly complete and correct as is possible under the circumstances. It will be deemed a favor if corrections and changes be reported, whenever known, to the Chancellor's office.

The School of Arts.

OFFICERS OF ALUMNI ASSOCIATION.

R. D. BROWN, '92,	President.
W. Y. MORGAN, '85,	Vice-President.
KATE L. RIGGS, '94,	Recording Secretary.
E. F. ENGEL, '92,	Corresponding Secretary.
M. W. STERLING, '83,	Treasurer.
M. A. BARBER, '91,	} Executive Committee.
MARY E. WILDER, '82,	
MARTHA SNOW BROWN, '98,	
C. E. MCCLUNG, '96,	
RICHARD R. PRICE, '97,	

Class of 1873.

Coleman, Flora *Richardson*, A. M., Lawrence, Kan.
 Collins, Ralph, A. B., Rodi, Allegheny county, Pa.
 Harris, Murray, A. B., Baird, Tex.
 Tosh, L. D. L., A. M., Argentine, Kan.

Class of 1874.

Hasselman, Ida *Blood*, B. S., Central ave. and 34th st., Indianapolis, Ind.
 Noyes, Ellis B., A. B., 200 Dinwiddie street, Portsmouth, Va.
 Oliver, Hannah, A. M., Lawrence, Kan.

Class of 1875.

Blackwelder, Alice G. *Boughton*, A. B., Morgan Park, Ill.
 Dinsmoor, Frank F., A. M. (Deceased.)
 Hallowell, Martha R. *Campbell*, A. B., 614 North Fourth street, Atchison, Kan.
 Herrick, W. S., B. S., Thurman, Ind.
 Irish, Eusebia B. *Mudge*, A. B., Manhattan, Kan.
 Mac Lennan, Frank P., M. S., Topeka, Kan.
 Stephens, Kate, A. M., care of J. W. Green, Lawrence, Kan.

Class of 1876.

Gaumer, George F., M. S., Izamal, Yucatan, Mexico.
 Richardson, Mary E., B. S., Lawrence, Kan.
 Sergeant, Willard F., A. B., Tacoma, Wash.
 Smith, Charles W., A. M., Stockton, Kan.
 Smith, Lizzie Ann *Williams*, A. B., Stockton, Kan.
 Tremper, Henry S., A. M., Seattle, Wash.
 Tucker, Elmer B., A. M., Sheffield, Iowa.
 Wickersham, James A., A. M., Terre Haute, Ind.

Class of 1877.

Atchison, Andrew, A. B., Parkville, Mo.
 Bierer, Everard, jr., B. S., 3217 Fifteenth street, N. W., Washington, D. C.
 Hapgood, George Will, B. S., Warren, Ohio.
 Long, John Harper, (S. D. Tuebingen), Evanston, Ill.
 Osburn, William, A. M., 107 University street, Nashville, Tenn.
 Perkins, Clara Luella *Morris*, A. M., Lawrence, Kan.
 Scott, Angelo C., A. M., Stillwater, Okl.
 Timmons, Colin, A. B., ———.
 Watson, Carrie M., A. B., Lawrence, Kan.
 Weaver, Gertrude Alice *Bullene*, Lawrence, Kan.

Class of 1878.

Boddington, Annie E., *Mozley*, B. S. (Deceased.)
 Boettcher, Kate *Williams*, A. B., Westline, Mo.
 Pillsbury, De Etta Warren, A. B., Tulare, Cal.
 Richards, Hugh Tudor, C. E., Los Angeles, Cal.

Class of 1879.

Austin, Jessie A., A. B., ———.
 Brigham, Joseph W., B. S., 21 Fayette street, Cambridgeport, Mass.
 Byrd, William T., A. B., Lawrence, Kan.
 Cramer, Charles B., B. S., Breckenridge, Colo.
 Garrett, Eudora A. *Wade*, M. S., Lawrence, Kan.
 Gleed, James W., A. M., Topeka, Kan.
 Jenkins, Howard H., A. B., Kansas City, Mo.
 Preston, Sarah I. *Stevens*, A. B. (Deceased.)
 Richards, Lizzie J. *Miller*, A. B., Los Angeles, Cal.
 Smith, Samuel M., A. B., Fort Worth, Tex.
 Stephenson, Chandler W., B. S., Newcomerstown, Ohio.
 Stevens, Wm. E., A. B., Kansas City, Kan.
 Wallace, Alma *Richardson*, A. B., Hermosa, Colo.

Class of 1880.

Baskerville, Sarah R., A. B., ———.
 Carruth, Wm. H., A. M., (Ph. D. Harvard), Lawrence, Kan.
 Chase, Henry V., B. S., Kansas City, Mo.
 Gilmore, Annie O., B. S., Lawrence, Kan.
 Hayes, James O., A. B. (Deceased.)
 Long, Ariel E., B. S., A. M. (Deceased.)
 Mettner, Cora M. *Cherry*, A. B. (Deceased.)
 Parker, Alfred E., B. S., Wellington, Kan.
 Riffe, Franklin, M. S., Wolff & Zwicker Iron Works, Portland, Ore.
 Williams, Solon T., A. B., 316 Temperance street, Seattle, Wash.

Class of 1881.

Doran, Mary Webb *Woodward*, A. B., B. D., Topeka, Kan.
 Eidemiller, Maggie Raymond, A. B., care of Long & Tower, Kansas City, Mo.
 Floden, Karl August, A. B., Hanford, Cal.
 Haworth, Erasmus, M. S., (Ph. D. Johns Hopkins), Lawrence, Kan.
 Henry, Nellie Green *Thacher*, A. B. (Deceased.)
 Henry, Stuart Oliver, A. B., St. Joseph, Mo.
 Hopkins, George Scott, A. M., Horton, Kan.
 Humphrey, Herbert John, A. B. (Deceased.)
 Hutchins, Bion Shepard, B. S., Ponca City, Okl.
 Kelley, Florence E. *Finch*, A. M., *The Times*, Los Angeles, Cal.

Little, Flora M. *Hadley*, A. B., Whittier, Cal.
 Nicholson, Julia M. *Watson*, A. B., Chicago, Ill.
 Rankin, Alice Annie *Collier*, A. B., Albuquerque, N. M.
 Rankin, Don John, B. S., Albuquerque, N. M.
 Scott, Charles Fred., M. S., Iola, Kan.
 Sears, Alice H. *Peabody*, A. B., Lawrence, Kan.
 Smith, Edward Gleason, B. S., 627 Van Buren street, Topeka, Kan.
 Soper, Pliny Leland, A. M., Tulsa, I. T.
 Upton, Charles Green, B. S., 2306 Jarboe street, Kansas City, Mo.
 Wilcox, Mina E. *Marvin*, A. M., Lawrence, Kan.

Class of 1882.

Foster, Festus, A. B., Waukomis, Okl.
 Foster, Richard, M. S., Howard University, Washington, D. C.
 Hamilton, Ethel *Allen*, A. M., 2317 Scottwood avenue, Toledo, Ohio.
 Hill, Abner Walter, B. S., ———.
 Meservey, Edward Clement, A. B., 304 American Bank building, Kansas City, Mo.
 Simmons, Charles Jefferson, A. B., M. D., Lawrence, Kan.
 Spray, Lindley Murray, A. B., Tonganoxie, Kan.
 Upton, Ellen A. *Woodcock*, A. B., 2306 Jarboe street, Kansas City, Mo.
 Wilder, Mary Elizabeth, A. B., B. D., Kansas City, Mo.
 Young, Philip Connor, B. S., Fredonia, Kan.

Class of 1883.

Brewster, Samuel Wheeler, A. B., Chanute, Kan.
 Briggs, Ada Eleanor, A. M., Lawrence, Kan.
 Brown, Edward Arnold, A. M., 3229 Lydia avenue, Kansas City, Mo.
 Butler, Edmund, B. S., Gebo, Mont.
 Dart, Charles Curtiss, M. S. (Deceased.)
 Foster, Alla May *Barnes*, B. S., 420 College street, Washington, D. C.
 Hutchings, Frank Day, A. B., Kansas City, Kan.
 Little, Edward Campbell, A. M., LL. B., Manila, P. I., Twentieth Kan. U. S. V.
 McQuiston, Mary Catherine, A. B., Lawrence, Kan.
 Murphy, Ann Eliza, B. S., Topeka, Kan.
 Osmond, Robert Murdaugh, A. B. (Deceased.)
 Raymond, Helen W. *Bay*, A. B., Terrace Place, Troy, N. Y.
 Russell, Percy Blackstone, A. B., Eagle's Nest, Miss.
 Smith, James Gabriel, A. B., 1611 Oak street, Kansas City, Mo.
 Spangler, William Cornelius, B. S., LL. B., Lawrence, Kan.
 Sterling, Cara E. *Fellows*, A. B., Lawrence, Kan.
 Sterling, Miles Wilson, A. M., Lawrence, Kan.
 Tucker, John Foster, A. B., New London, Conn.
 Walker, Oliver David, B. S., M. D., 420 Main street, Keokuk, Iowa.
 Whirlow, William Solomon, B. S., Kingfisher, Okl.

Class of 1884.

Barnes, Mary Elwood *Miller*, A. B., Seventeenth ave. and Pearl st., Denver, Colo.
 Britton, Walter Hamlin, A. B. (Deceased.)
 Churchill, Delia Kate, A. B., B. D. (Deceased.)
 Clarke, Mary Agnes, A. B. (Deceased.)
 Dean, Charles Dickey, B. S. (Deceased.)
 Dyche, Lewis Lindsay, A. M., M. S., Lawrence, Kan.
 Emery, Agnes, A. B., Lawrence, Kan.
 Findley, Wm. Townsend, A. B., Winnebago, Thurston county, Neb.
 Gillham, Clara Sciota, A. B., Lawrence, Kan.
 Gilmore, Mary Green, A. B., B. D., Colorado Springs, Colo.
 Hopkins, Cora E. *Pierson*, B. S., Horton, Kan.
 Keys, Merton Joy, B. S., Bennington, Kan.

Leach, Lucius Henry, A. B., Vancouver, Wash.
 Lester, Kate L. *Ridenour*, A. B., 1356 Josephine street, Denver, Colo.
 Litchfield, Alice Lewette, A. B., B. D., Lawrence, Kan.
 Miller, Glen Lewis, A. B., Utah National Bank, Salt Lake City, Utah.
 Nevison, Wm. Henry, A. B., (M. D. Cincinnati), Cleveland, Ohio.
 Osmond, Mary *Griffith*, A. B., corner Seventeenth and Pearl streets, Denver, Colo.
 Prentiss, Frank, B. S., Colorado Springs, Colo.
 Riffle, Albert Stanley, B. S., Martinez, Cal.
 Romig, Lida, A. B., Abilene, Kan.
 Stocks, Fred. Asa, M. S., Blue Rapids, Kan.
 Watson, George Brown, A. B., LL. B., Kansas City, Kan.
 Wheeler, Addie Mila *Suttiff*, A. B., Lawrence, Kan.
 Wood, Clarence Ernest, A. B., Irwin, Okl.

Class of 1885.

Barnes, Ida Charlotte, A. B., (M. D. Pennsylvania), Topeka, Kan.
 Boles, Nettie A. *Hubbard*, B. S., 832 East Colfax avenue, Denver, Colo.
 Bruce, Blanche Ketene, A. B., Leavenworth, Kan.
 Caldwell, Eldie Franklin, A. B., LL. B., Lawrence, Kan.
 Cook, Samuel Marion, A. B., Kansas City, Mo.
 Curdy, Albert Eugene, A. B., Orchard Lake, Mich.
 Foster, Frank Sharon, B. S., Ellsworth, Kan.
 Himoe, Stephen Ernest, B. S., Kansas City, Mo.
 Hulick, Harriet Clark, B. S., 799 Warren avenue, Chicago, Ill.
 Humphrey, James Vance, B. S., Junction City, Kan.
 Johnson, Wm. Hamilton, A. M., Helena, Mont.
 Linley, Victor, A. B., West Superior, Wis.
 Morgan, Wm. Yoast, A. B., Hutchinson, Kan.
 Powell, Lewis Morgan, A. B., M. D., Topeka, Kan.
 Rote, John Paul, A. B., San Antonio, Tex.
 Smith, Henry Fremont, B. S., Wellington, Kan.
 Stevens, Wm. Chase, M. S., Lawrence, Kan.
 Whitehill, Harriet *Williams*, A. M., Boston, Mass.

Class of 1886.

Adams, Arthur L., B. S., Los Angeles, Cal.
 Birbeck, Richard, B. S., 2145 "A" Geyer avenue, St. Louis, Mo.
 Burkholder, Samuel, A. B., Marion, Kan.
 Curry, Joseph Ellsworth, A. B., Cranbury, New Jersey.
 Emery, Sarah Maria, A. B., Lawrence, Kan.
 Flinn, Julia Georgianna, A. B., Lawrence, Kan.
 Gilmore, Solon Thacher, A. B., Kansas City, Mo.
 Graham, Harlan F., A. M., B. D., Holton, Kan.
 Graham, Louella *Palmer*, A. B., Holton, Kan.
 Greenmeyer, Claribel, A. B., Kansas City, Mo.
 Lane, Wm., B. S. (Deceased.)
 Lyons, Laura Edith, A. B., Lawrence, Kan.
 MacDonald, Harriet Bliss *Haskell*, A. M., Brunswick, Me.
 McLaren, John Dice, M. S., B. D., Brookings, S. D.
 Miller, Evelyn *Smith*, A. B., Los Angeles, Cal.
 Oakley, Frank Thompson, B. S., 824 Spitzer building, Toledo, Ohio.
 Riggs, Harry Earle, A. B., 613 The Nasby, Toledo, Ohio.
 Smith, Harriet R. *Dunn*, B. S. (Deceased.)
 Stimpson, Mary G., A. B., B. D. (Deceased.)
 Templin, Olin, M. S., A. M., Lawrence, Kan.
 Templin, Lena Angie *Van Voorhis*, A. M., B. D., Lawrence, Kan.
 Townsend, Rebecca E. *Jacke*, A. B., Stillwater, Okl.

Class of 1887.

Blair, Edward Giles, A. M., M. D., Kansas City, Mo.
 Crane, Cyrus Sykes, A. B., 117 West Sixth street, Kansas City, Mo.
 Davis, Jephtha Dickey, A. B., M. D., Cincinnati, Ohio.
 Dunn, Denton, A. B., 406 New England building, Kansas City, Mo.
 Franklin, William Suddards, M. S., (S. D. Cornell), Lehigh Univ., Bethlehem, Pa.
 Harrington, Grant W., A. B., B. D., Hiawatha, Kan.
 Highbargin, Claude Britton, B. S. Cripple Creek, Colo.
 Himoe, Hans Clarence, A. B. (Deceased.)
 Jenks, Wilbur Simpson, A. B., B. D., Ottawa, Kan.
 Lippincott, Joseph Barlow, B. S., California Bank building, Los Angeles, Cal.
 Markley, Albert Calvin, A. B., B. D., Topeka, Kan.
 McAlpine, Robert Lynn, B. C. E., United States Geological Survey.
 Mellon, Georgia L. *Bell*, A. B., 502 Mellon street, Pittsburg, Pa.
 Melvin, Cora *Kimball*, A. B., B. D., Lawrence, Kan.
 Moore, Luella Jane, A. B., Denison, Tex.
 Nickel, Henri, A. M., B. D. (Deceased.)
 Rice, Mary Antoinette, A. M., Ph. G., Lawrence, Kan.
 Ropes, Ella Elson, A. B., 3220 South Ninth street, St. Louis, Mo.
 Shattuck, Samuel W., jr., B. S., Wichita, Kan.
 Smith, Charles Lincoln, B. S., Butte, Mont.
 Smith, Harry Denman, A. B., corner Liberty and Ninth streets, Hopkinsville, Ky.
 Strickland, Agnes *Wright*, B. S., Junction City, Kan.
 Thompson, Olive, B. S., Waterville, Kan.

Class of 1888.

Allbright, Clara A. *Wilson*, A. B., ———.
 Allen, Winfield Scott, A. B., B. D., Newton, Kan.
 Bowersock, Fred Holmes, B. C. E., Lawrence, Kan.
 Brown, Wm. Harvey, B. S., Rhodesia, South Africa.
 Chaffee, Annis Francena, A. B., B. D., Minneapolis, Kan.
 Cone, Wm. Riley, A. B., B. D., Florence, Kan.
 Crowell, Frank Grant, A. B., (LL. B. Columbia), Atchison, Kan.
 Cunkle, Austin Curtis, A. B., Fort Smith, Ark.
 Doran, Thomas Francis, A. B., Topeka, Kan.
 Franklin, Edward Curtis, M. S., (Ph. D. Johns Hopkins), Lawrence, Kan.
 Gilmore, Josephine, A. B., B. D., Lawrence, Kan.
 Goddard, Paul, B. C. E., Sedgwick, Kan.
 Halligan, John Morris, B. S., Troy, Kan.
 Higgins, Wm. Edward, B. S., Lawrence, Kan.
 Le Seur, Owen Cyrus, B. C. E., Lawrence, Kan.
 Prescott, John Adams, A. M., Keith & Perry building, Kansas City, Mo.
 Reed, Wm. Turner, A. B., New York Life building, Kansas City, Mo.
 Ralston, Joseph, A. B., Burlington, Kan.
 Savage, Frank John, B. C. E., Lawrence, Kan.
 Sloan, Adelia May *Churchill*, A. B., B. D., San Bernardino, Cal.
 Springer, Clarence E., B. C. E., Spaulding, Idaho.

Class of 1889.

Buckingham, Harry, B. S., Kingfisher, Okl.
 Caywood, Wm. Talbot, A. B., 1005 Julia street, New Orleans, La.
 Davenport, Gertrude Anna *Crotty*, B. S., Cambridge, Mass.
 Dick, George Lowman, A. B. (Deceased.)
 Harvey, Sherman Allen, A. B., Lawrence, Kan.
 Henshaw, Flora A. *Newlin*, A. B., Lawrence, Kan.
 Hunnicutt, Gertrude Oren, A. B., Lawrence, Kan.
 Jacobs, Joseph, B. C. E., Los Angeles, Cal.
 Johnson, Susan F. *Eddy*, A. B., Lawrence, Kan.

Kellogg, Vernon Lyman, M. S., Stanford University, Cal.
 Kennedy, Asa Dutton, B. S., Lawrence, Kan.
 McKinnon, Anna Louise, M. S., (Ph. D. Cornell), Aurora, N. Y.
 Merrill, Catharine, A. B., University of Chicago, Chicago, Ill.
 Parmalee, Mary A. *Manley*, A. B., Buffalo, Wyo.
 Phillips, Sidney, A. B., Fairview, Kan.
 Reed, Frank Everett, A. B., New York Life building, Kansas City, Mo.
 Sloan, Alva Leslie, B. C. E., San Bernardino, Cal.
 Smith, Lawrence Theodore, B. S., cor. Wentworth and Sixty-ninth sts., Chicago, Ill.
 Squires, Edwin Eberhard, B. S., Kearney, Neb.

Class of 1890.

Armstrong, Walter Root, A. B., K. C. P. & G. Rly., Kansas City, Mo.
 Bartell, Emma, B. S., 1605 San Jacinto street, Houston, Tex.
 Bear, Harvey F. M., B. S., Wellington, Kan.
 Brewster, Schuyler Colfax, B. S., Iola, Kan.
 Brooks, Neil C., A. B., 1013 Urbana street, Urbana, Ill.
 Burney, Abraham Lincoln, A. B., Harrisonville, Mo.
 Dalton, B. J., B. C. E., Independence, Kan.
 Esterly, Daniel Edward, B. S., (M. D. Pennsylvania), Topeka, Kan.
 Fellows, Harriette Augusta, A. M., 414 Shannon avenue, Spokane, Wash.
 Goodell, Nettie Delilah, B. S., Sedgwick, Kan.
 Henshaw, Leland DeForest, B. C. E. (Deceased.)
 Hill, Wm., A. B., University of Chicago, Chicago, Ill.
 Howland, Marcella, A. B. (Deceased.)
 Liddeke, Fred, A. B., Centerville, Cal.
 McFarland, Charles Stone, B. C. E., Burnside, La.
 Pickering, Frederick Scott, B. C. E., Olathe, Kan.
 Radcliffe, Harry, B. S., Indianapolis, Ind.
 Reasoner, Florence, A. B., Leavenworth, Kan.
 Reynolds, Wm. Henry, B. S., Port Chalmette, La.
 Rush, John Anderson, M. S., LL. B., Denver, Colo.
 Short, Richard H., B. C. E., Hutchinson, Kan.
 Slosson, Edward Emery, M. S., Laramie, Wyo.
 Stimpson, Edward Fisk, B. S., Lawrence, Kan.
 Sutliff, Helen Binninger, A. B., Lawrence, Kan.
 Taggart, Inez Lorena, A. M., Denver, Colo.
 Watson, Campbell McGhie, A. B., Shawnee, Kan.
 Williamson, Park Austin, B. C. E., Edwardsville, Kan.
 Wilmoth, Emma G. *Dunn*, B. C., Concordia, Kan.

Class of 1891.

Barber, Marshall Albert, A. B., (A. M. Harvard), Lawrence, Kan.
 Bowersock, Justin DeWitt, B. S., (LL. B. Harvard), Kansas City, Mo.
 Brown, Maude *Springer*, A. B., Kansas City, Mo.
 Chapman, Charles Parsons, A. B., Peru, South America.
 Craig, James Frank, A. B., South McAlester, I. T.
 Culver, May Ibella *Hair*, A. B., Concordia, Kan.
 Franklin, Effie *Scott*, A. B., Lawrence, Kan.
 Fugate, Jessamine *Howell*, A. M., Newton, Kan.
 Hayden, Walter Scott, A. B., West Pawlet, Vt.
 Kellogg, Fred Homer, A. B., South McAlester, I. T.
 Lockwood, Laura E., A. M., Wellesley, Mass.
 McKinnon, Malcolm, A. B., Oak Park, Chicago.
 Morris, Irving Haskell, B. S., St. Patricks, La.
 Nichols, Galen Frank, B. S., LL. B., North Topeka, Kan.
 Olney, Frank Hart, A. B., Lawrence, Kan.
 Pugh, Ann Reese, A. M., Wells College, Aurora, N. Y.

Rice, Martin Everett, M. S., Lawrence, Kan.
 Roberts, Herbert Fuller, A. B., University of Chicago, Chicago, Ill.
 Rutledge, Robert Anderson, B. C. E., Florence, Colo.
 Shrader, Frank Charles, M. S., U. S. Geological Survey, Washington, D. C.
 Snow, William Appleton, M. S., Stanford University, Cal.
 Spencer, Virginia E., A. M., B. D., Helena, Mont.

Class of 1892.

Barnes, Harold, A. B., Beloit, Kan.
 Brown, Robert Dimond, A. B., (LL. B. Northwestern), Kansas City, Mo.
 Brown, William Wallace, A. B., Burlington, Kan.
 Candy, Albert Luther, A. M., Lincoln, Neb.
 Copper, Howard Elijah A. B. (Deceased.)
 Crotty, Millia Alice, A. B., Burlington, Kan.
 Davis, Ova Portis, A. B., (M. D. Rush), North Topeka, Kan.
 Dyche, James Edward, A. B., Horton, Kan.
 Engel, Elmer Franklin, A. B., (A. M. Harvard), Lawrence, Kan.
 Hadley, Herbert Spencer, A. B., (LL. B. Northwestern), Kansas City, Mo.
 Johnson, Charles H., A. B., M. D., Atchison, Kan.
 Noble, James Franklin, A. B., (LL. B. Northwestern), Chicago, Ill.
 Potter, Dwight Elwood, A. B., Oakland, Cal.
 Sawtell, James Herbert, A. B., Wamego, Kan.
 Simmons, Samuel McClay, A. B., Kansas City, Mo.
 Spencer, Belle Lundie, A. B., Portland, Ore.
 Stewart, Carrie Taylor, A. B., (A. M. Michigan), Negaunee, Mich.
 Thompson, Martha Alice, A. B., Lawrence, Kan.
 Truitt, Walter, A. B., Chanute, Kan.
 Virtue, George Olien, A. B., (A. M. Harvard), 152 West Wabasha st., Winona, Minn.
 Wellman, Ernest Pratt, A. B., 2331 Le Conte avenue, Berkeley, Cal.
 Wellman, Mary Harriet, A. M., Stanford University, Cal.

Class of 1893.

Adams, George Irving, A. M., (Ph. D. Princeton), U. S. Geol. Surv., Washington, D. C.
 Becker, Cora Elmira, A. B., Lawrence, Kan.
 Berry, Josephine Thorndyke, A. B., Waterville, Kan.
 Blair, Kate, A. B., Effingham, Kan.
 Boell, Anna *Schorer*, A. B., Riley, Kan.
 Bowman, Nina Claire, A. B., Newton, Kan.
 Case, Ermine Cowles, A. M., (M. S. Cornell, Ph. D. Chicago), Milwaukee, Wis.
 Chappelle, Edith *Manley*, A. M., Buffalo, Wyo.
 Cooke, Thornton, A. B., Herington, Kan.
 Corbin, Alberta Linton, A. B., 26 Howe street, New Haven, Conn.
 Cress, Parker William, A. B., Perry, Okl.
 Curry, Wm. Melville, A. B., Linesville, Pa.
 Eaton, Grace Caroline, A. B., Wamego, Kan.
 Fiegenbaum, Henry, A. B., St. Joseph, Mo.
 Fullerton, Albert, A. B., 912 Fullerton building, St. Louis, Mo.
 Hamaker, John Irving, A. B., (A. M. Harvard), Durham, N. C.
 Hickey, Ernest Clyde, A. B., Cripple Creek, Colo.
 Hickey, Mayo Ellsworth, A. B., Albuquerque, N. M.
 Hunter, Samuel John, A. M., Lawrence, Kan.
 Jones, Edna, A. B., Lawrence, Kan.
 Lange, Francis Joseph, A. B., Elgin, Ill.
 Linville, Henry Richardson, A. B., (A. M. Harvard), New York city.
 Lutz, Frank Amanda, A. B., Beloit, Kan.
 Morris, Nellie Vie, A. B., Lawrence, Kan.
 O'Leary, Raphael Dorman, A. B., Lawrence, Kan.
 Owen, James, A. B., LL. B., Cripple Creek, Colo.

Raymond, Wm. Murray, A. B., Sedalia, Mo.
 Reno, Wm. Wilkinson, A. B., Detroit, Mich.
 Riddle, Wm. Halderman, A. B. (Deceased.)
 Riggs, Henry Clay, A. B., University of Chicago, Chicago.
 Robinson, Ernest Frank, A. B., (M. D. Pennsylvania), surgeon in U. S. Army.
 Ross, Wilbert Davidson, A. M., Leavenworth, Kan.
 Rush, Maggie Sarah, A. B., Argentine, Kan.
 Sherman, Adrian Fisher, A. B., LL. B., Topeka, Kan.
 Soderstrom, Elmer Eugene, A. B., Lawrence, Kan.
 Spencer, Daniel Hooker, A. B., Lawrence, Kan.
 Springer, Eugene William, A. B., Argonia, Kan.
 Vaniman, Chauncey, A. B., Guthrie, Okl.
 Whitman, Russell Ripley, A. B., *The Journal*, Kansas City, Mo.
 Wilson, Josie, A. B., Cawker City, Kan.
 Wine, Jacob Good, A. B., care Lathrop, Morrowe, Fox & Moore, Kansas City, Mo.

Class of 1894.

Baker, James Edward, A. B., Wellsville, Kan.
 Barkley, Mary Wager, A. B., Topeka, Kan.
 Blackman, Rollin Elliott, A. B., Lawrence, Kan.
 Bloss, Schuyler Colfax, A. B., Winfield, Kan.
 Buchan, Fred. Erskine, A. B., LL. B., Manila, P. I., Twentieth Kansas U. S. V.
 Butcher, Thomas Walter, A. B., Wellington, Kan.
 Cann, Eli, A. B., LL. B., Gold Hill, Colo.
 Carlson, John Felix, A. B., Topeka, Kan.
 Castle, Clara *Bosworth*, A. B., Cambridge, Mass.
 Corbin, Arthur Linton, A. B., 26 Howe street, New Haven, Conn.
 Couch, Alvan Harvey, A. B., Prairie Center, Kan.
 Douglas, MacGregor, A. B., Oklahoma City, Okl.
 Fogle, William Cornelius, A. B., Williamsburg, Kan.
 Garrett, Albert Osburn, A. B., Fort Scott, Kan.
 Griffin, Charles Sumner, A. B., (A. M. Harvard), Tokyo, Japan.
 Harris, Eleanor, A. B., Manhattan, Kan.
 Harvey, Edward, A. B., Lawrence, Kan.
 Hawkins, Nelle Susannah, A. B., Ottawa, Kan.
 Holmes, Mary K. *Haskell*, A. B., Cresco, Iowa.
 Hill, Burrit Howell, A. B., Neodesha, Kan.
 Hoff, Robert Lee, A. B., Buffalo, Wyo.
 Hogg, Archibald, A. B., LL. B., Lawrence, Kan.
 Howell, Frederick Noble, A. B., El Reno, Okl.
 Kruse, Henry Otto, A. B., Newton, Kan.
 Lowther, Lloyd A., A. B., Emporia, Kan.
 May, James Vance, A. B., Canandaigua, N. Y.
 Moore, Frank Horace, A. B., (LL. B. Columbian), Kansas City, Mo.
 Morgan, Rose Ruth, A. B., Leavenworth, Kan.
 Mustard, John, A. B., Rush Medical College, Chicago, Ill.
 Neal, Stella May *Miller*, A. B., Lawrence, Kan.
 O'Bryon, Edward Isaac, A. B. (Deceased.)
 Owen, Winnifred *Churchill*, A. B., Cripple Creek, Colo.
 Palmer, Ezra W., A. B., Cripple Creek, Colo.
 Piatt, Wm. Harrison, A. B., LL. B., 306 American Bank building, Kansas City, Mo.
 Ploughe, Sherman, A. B., Hutchinson, Kan.
 Radford, Laura, A. B., Kansas City University, Kansas City, Kan.
 Riggs, Kate Louise, A. B., Lawrence, Kan.
 Rothrock, Irvin R., A. B., A. M., Burnside, La.
 Schumaker, George Alex, A. B., Olivette, Kan.
 Sears, Lorin Beecher, A. B. (Deceased.)
 Spencer, May Hotchkiss, A. B., Lawrence, Kan.

Spencer, Nancy Clarinda, A. B., Helena, Mont.
 Thrasher, Luther Elias, A. B., Appraisers' building, San Francisco, Cal.
 Wilson, Henry Dent, A. B., Holton, Kan.

Class of 1895.

Alden, Maurice LeRoy, A. B., (LL. B. Columbian), Kansas City, Kan.
 Anderson, Kate, A. B., Independence. Mo.
 Banks, Anna Burnett, A. B., Topeka, Kan.
 Bowker, Frank Clarence, A. B., (M. D. Hahnemann), Chicago, Ill.
 Brown, Silas Scholl, A. B., Wichita, Kan.
 Buchan, Lucinda *Smith*, A. B. (Deceased.)
 Burney, Clarence Alexander, A. B., (LL. B. Columbia), Kansas City, Kan.
 Burney, Edith *Haskell*, A. B., Harrisonville, Mo.
 Cahill, Fred, A. B., Oak Park, Ill.
 Carpenter, May, A. B., Lawrence, Kan.
 Clark, Eva Clarissa *Gill*, A. B., Manhattan, Kan.
 Clarke, Edith M., A. B., Lawrence, Kan.
 Clear, John Daniel, A. B., Kansas City, Mo.
 Cone, Ralph Waldo, A. B., Cambridge, Mass.
 Craig, Luella C. *Moore*, A. B., Tuskegee, Ala.
 Crane, Walter Richard, A. B., (A. M. Columbia), New York city.
 Dick, Wm. Christian, A. B., Mount Hope, Kan.
 Dickinson, Breese Morse, A. B., ———.
 Edwards, John Addison, A. B., Emporia, Kan.
 Frazier, John Austin, A. B., Pratt, Kan.
 Freeman, Lillie May, A. B., Concordia, Kan.
 Funston, Ella, A. B., Carlyle, Kan.
 Gardner, Wilbur Ludington, A. B., LL. B., 174 La Salle street, Chicago, Ill.
 Hackney, Edward T., A. B., Wellington, Kan.
 Hall, John Galentine, A. B., Cambridge, Mass.
 Harrington, John Lyle, A. B., Milwaukee, Wis.
 Humphrey, Adelia Alice, A. B., *The Journal*, Kansas City, Mo.
 Ingalls, Sheffield, A. B., Atchison, Kan.
 Kimpton, Carl Edward, A. B., Netawaka, Kan.
 Loader, Effie, A. B., Clay Center, Kan.
 Menet, Margaret, A. B., Lawrence, Kan.
 Messenger, J. Frank, A. B., Albuquerque, N. M.
 Miller, Clyde Winwood, A. B., Osage City, Kan.
 Miller, Harrison William, A. B., McPherson, Kan.
 Miller, John DeMott, A. B., Peabody, Kan.
 Moore, William, A. B., Fort Scott, Kan.
 O'Leary, Matilda *Henrichs*, A. B., Lawrence, Kan.
 Olinger, Stanton, A. B., ———.
 Orton, Daisy, A. B., Mus. B., White Cloud, Kan.
 Pampel, Byron Lee, A. B., Omaha, Neb.
 Parrott, Florence Emma, A. B., Lawrence, Kan.
 Peterson, Bertha, A. B., Oskaloosa, Kan.
 Rush, Elmer Ellsworth, A. B., Kansas City, Mo.
 Schaum, Madge, A. B., Lansing, Kan.
 Scheffer, Theophilus H., A. B., Delphos, Kan.
 Scott, Mabel, A. B., Helena, Mont.
 Simons, Etoile, A. B., Lawrence, Kan.
 Southwick, Clarence Talbot, A. B., *The Journal*, Kansas City, Mo.
 Spencer, Mary Marenda, A. B., Pleasanton, Kan.
 Stimpson, Franc R. *Fellows*, A. B., Lawrence, Kan.
 Stone, Sadie Melinda, A. B., Atchison, Kan.
 Wedel, Peter J., A. B., Lindsborg, Kan.
 Young, Samuel A. M., A. B., Independence, Kan.
 Zeller, Augustus P., A. B., Cambridge, Mass.

Class of 1896.

- Alford, Alfred Cecil, A. B. (Deceased.)
 Alison, Daisy, A. B., Oxford, Ohio.
 Breese, Burtis Burr, A. B., Columbia University, New York city.
 Brewster, Frederick William, A. B., Iola, Kan.
 Brewster, Grace Hannah, A. B., Iola, Kan.
 Brown, Clydus Clinton, A. B., Harvard University, Cambridge, Mass.
 Burd, Mary, A. B., Girard, Kan.
 Butcher, Hardin Price, A. B., Olathe, Kan.
 Caughoy, Rudolph, A. B., Horton, Kan.
 Claassen, Peter A., A. B., Winfield, Kan.
 Cooke, Carina Antoinette, A. B., Herington, Kan.
 Dillard, Mary Jane, A. B., Lawrence, Kan.
 Edwards, Anna Gosline, A. B., Scranton, Kan.
 Ellis, Leander Dallas, A. B., Burlington, Kan.
 Foster, Dean, A. B., Yale University, New Haven, Conn.
 Fryar, Oscar James, A. B., Burrton, Kan.
 Glathart, Albert B., A. B., Lawrence, Kan.
 Gowell, Ralph Curtis, A. B. (Deceased.)
 Grant, Aaron George, A. B., Deadwood, S. D.
 Griffiths, Walter, A. B., San Francisco, Cal.
 Haines, Frances Moon, A. B., Sabetha, Kan.
 Hammers, Fred Ketcham, A. B., ———.
 Hardy, Linda, A. B., Hiawatha, Kan.
 Henderson, John H., A. B., Iola, Kan.
 Hill, Irving, A. B., Lawrence, Kan.
 Hilliker, Rhoda Lulu Hoover, A. B., Tulare, Cal.
 House, Frank E., A. B., Lawrence, Kan.
 Hullinger, Joseph Warren, A. B., Kansas City, Kan.
 Johnson, Charles Edward, A. B., Beloit, Kan.
 Kinzie, John Frederick, A. B., Hiawatha, Kan.
 Logan, Wm. Newton, A. B., A. M., University of Chicago, Chicago, Ill.
 Ludlum, Elmer Charles, A. B., Salina, Kan.
 Madden, Robert Thornton, A. B., Neodesha, Kan.
 Madden, Wm. Joseph, A. B., Hays City, Kan.
 Magaw, Wm. Joseph, A. B., Valle Vista, Cal.
 McClung, Clarence Irwin, A. B., Lawrence, Kan.
 McCroskey, Ward Carpenter, A. B., Horton, Kan.
 McMurray, Arthur, A. B., Humboldt, Neb.
 Nichols, Maude Estelle, A. B., Olathe, Kan.
 Page, Larrance, A. B., Manila, P. I., Twentieth Kansas U. S. V.
 Patten, James Horace, A. B., Harvard University, Cambridge, Mass.
 Perry, Helen, A. B., Englewood, Kan.
 Prentice, Sydney Clarke, A. B., Lawrence, Kan.
 Quinlan, Cassie Alma, A. B., Lawrence, Kan.
 Raymond, Fred Newton, A. B., C. & A. R. R., New York city.
 Riggs, Elmer Samuel, A. B., A. M., Field Columbian Museum, Chicago, Ill.
 Rohe, Alice, A. B., Lawrence, Kan.
 Stewart, Alban, A. M., Lawrence, Kan.
 Templin, Mabel Hall, A. B., 201 Garfield avenue, Kansas City, Mo.
 Thierstein, John R., A. B., Fredonia, Kan.
 Thornburn, Blanche Isabel, A. B., 608 Ogden avenue, Chicago, Ill.
 Thompson, Agnes, A. B., Lawrence, Kan.
 Towne, Louise Isabella, A. B., Lawrence, Kan.
 Wallace, Carl T., A. B., Hiawatha, Kan.
 Way, Eva, A. B., Holton, Kan.
 White, Dora Estella, A. B., Topeka, Kan.
 Whitzel, Frank R., A. B., A. M., Lawrence, Kan.
 Wick, Carl, A. B., New Chillicothe, Kan.

Class of 1897.

- Alder, Eugene Charles, A. M., Harvard University, Cambridge, Mass.
Allen, Emily, A. B., Topeka, Kan.
Ayres, Harriet Hull, A. B., Lawrence, Kan.
Barber, Emma Maude, A. B., Lawrence, Kan.
Barnett, Mary P., A. B., Tarkio, Mo.
Brown, Lola Belle, A. B., Horton, Kan.
Cady, Hamilton Perkins, A. B., Lawrence, Kan.
Clarke, Florence Greeley, A. B., Lawrence, Kan.
Cooke, May, A. B., Herington, Kan.
Darling, Alice Grace, A. B., Lawrence, Kan.
Davies, Howell Emelyn, A. B., Chicago University, Chicago, Ill.
Davis, Edith, A. B., Topeka, Kan.
Dudley, Mary Josephine, A. B., ———.
Everett, Robert Edward, A. B., Lawrence, Kan.
Faxon, Ada, A. B., Lawrence, Kan.
Fay, Charles Lyman, A. B., Baineville, Kan.
Flint, Leon Nelson, A. B., Lawrence, Kan.
Frazer, Frances Rebekah, A. B., Coffeyville, Kan.
Gardner, May, A. B., Lawrence, Kan.
Geiger, Minnie, A. B., South Amana, Iowa.
Gray, Leslie Carlton, A. B., Salina, Kan.
Greenfield, Sadie E., A. B., University of Chicago, Chicago, Ill.
Grove, Bessie Eleanor, A. B., Lawrence, Kan.
Hall, John Franklin, A. B., Pleasanton, Kan.
Heil, Louis Peter, A. B., Topeka, Kan.
Hester, Oran Thomas, A. B., Harvard University, Cambridge, Mass.
Howland, Constance Genevieve, A. B., Lawrence, Kan.
Hozier, Jennie, A. B., Atchison, Kan.
Ikenberry, Levi Daniel, A. B., Daleville, Va.
Irwin, Edward Payson, A. B., Lawrence, Kan.
Katherman, Charles Augustus, A. B., Howard, Kan.
Kirby, Laura Ellen, A. B., Lawrence, Kan.
Kohn, Harry Reuben, A. B., New York city.
Landis, Maude, A. B., Lawrence, Kan.
Lewelling, Pauline, A. B., Wichita, Kan.
Mann, Andrew Wilson, A. B., Horton, Kan.
McMurray, Will, A. B., Boulder, Colo.
Menke, Harry William, A. B., Field Columbian Museum, Chicago, Ill.
Miller, Benjamin Leroy, A. B., Oskaloosa, Iowa.
Nash, Lou, A. B., Topeka, Kan.
Opp, Schuyler, A. B., Wa Keeney, Kan.
Osborn, Roy Thornton, A. B., Lawrence, Kan.
Parrott, Percy John, A. B., Manhattan, Kan.
Powell, Charles Samuel, A. B., Minneapolis, Kan.
Price, Richard Rees, A. B., Hutchinson, Kan.
Reed, Will Thomas, A. B., Topeka, Kan.
Riggs, May Fuller, A. B., Lawrence, Kan.
Robinson, Roy Martin, A. B., Columbia Law School, New York city.
Rohrer, Christian A., A. B., Chapman, Kan.
Rosenquist, Flora Isabel, A. B., Paola, Kan.
Sharpe, Charles Manford, A. B., Lawrence, Kan.
Shire, Anna Mathilda, Leavenworth, Kan.
Short, John Chistopher, A. B., Salina, Kan.
Smith, Harold Weeks, A. B., Kansas City, Mo.
Smith, Ida Greeley, A. B., Lawrence, Kan.
Smith, Joseph Elijah, A. B., Missouri National Bank, Kansas City, Mo.
Stanton, Alta, A. B., Lawrence, Kan.
Sterling, Charles Morgan, A. B., Lawrence, Kan.

Stevens, George Walter, A. B., Guthrie, Okl.
 Thomas, Gomer M., A. B., 525 Delaware street, Kansas City, Mo.
 Tinsley, Nora Maud, A. B., Horr, Mont.
 Wallace, Carrie *Katherman*, A. B., Hiawatha, Kan.
 Warren Elizabeth, A. B., El Reno, Okl.
 Williams, Martha Philippa, A. B., University of Chicago, Chicago, Ill.
 Wood, Frederick Hill, A. B., Lawrence, Kan.

Class of 1898.

Abel, Anna Heloise, A. B., Colby, Kan.
 Addison, Mayme, A. B., Lawrence, Kan.
 Anderson, Ella Marie, A. B., Morganville, Kan.
 Avery, Nellie *Criss*, A. B., Lawrence, Kan.
 Belcher, Charles Norton, A. B., Lawrence, Kan.
 Brown, Martha *Snow*, A. B., Rhodesia, South Africa.
 Cavin, Alberta Ruth, A. B., Florence, Kan.
 Chaffee, Arthur Gill, A. B., Neodesha, Kan.
 Chamberlain, Lawrence Safford, A. B., Topeka, Kan.
 Chapman, Gertrude, A. B., Horton, Kan.
 Cheadle, John, A. B., Pleasanton, Kan.
 Clark, Wm. Haskell, A. B., Warrensburg, Mo.
 Clock, Wilkie Clyde, A. B., Boston University, Boston, Mass.
 Crawford, Annie Leora, Caney, Kan.
 Crisman, George, A. B., Minneapolis, Kan.
 Crooks, John Wesley, A. B., 44 Irving street, Pittsburg, Pa.
 Douglass, Walter Woodroe, A. B., Beloit, Kan.
 Dryden, Nellie, A. B., Mulvane, Kan.
 Elliott, Phillip Sheridan, A. B., Lawrence, Kan.
 Field, Rhoda Kidder, A. B., Solomon, Kan.
 Frank, Tenny, A. B., Lawrence, Kan.
 Gallup, Stella Cornelia, A. B., Blue Rapids, Kan.
 Gephart, Eleanor Marshall, A. B., Valley Falls, Kan.
 Glenn, Pressley Adams, A. B., Highland Academy, Highland.
 Greider, Wm. Henry, A. B., White Cloud, Kan.
 Hall, Justus Otho, A. B., Olathe, Kan.
 Hamill, Claude Emmett, A. B., Lawrence, Kan.
 Haven, Elmer Franklin, A. B., Pleasanton, Kan.
 Henry, Thomas Bravois, A. B., Independence, Kan.
 Hickey, Ethel Ailene, A. B., Marion, Kan.
 Hill, Jennie *Mershon*, A. B., Buckner, Mo.
 Jackson, Arthur Page, A. B., Manila, P. I., Twentieth Kansas U. S. V.
 Johnson, Frank Hillyer, A. B., *The Journal*, Kansas City, Mo.
 Kyser, William Melvin, A. B., Altamont, Kan.
 Laughlin, Irving Scott, A. B., Foster, Mo.
 Loomis, Charles Henry, A. B., Merriam, Kan.
 McCall, Bert Bernard, A. B., Belleville, Kan.
 McGee, Charles J., A. B., Leavenworth, Kan.
 McGregor, Mabelle Christa, A. B., Winfield, Kan.
 McPherson, John Edward, A. B., Blue Rapids, Kan.
 Messerley, Charles Gottlieb, A. B., Osage City, Kan.
 Miller, Anna Laura, A. B., Peabody, Kan.
 Mosse, Ruth *Grover*, A. B., Kansas City, Mo.
 Myers, Wm. Lewis, A. B., El Dorado, Kan.
 Neal, Robert Wilson, A. B., Lawrence, Kan.
 Neuenschwander, Elise, A. B., Wa Keeney, Kan.
 Northrup, Fred Dettmar, A. B., Kansas City, Kan.
 Olsen, Louis Bernard, A. B., Tonganoxie, Kan.
 Peairs, Howard A., A. B., Los Angeles, Cal.
 Pennington, Celia Emma, A. B., Lawrence, Kan.

Phillips, Duff G., Helena, Ark.
 Potts, Issie Brander, A. B., Paola, Kan.
 Radford, Agnes, A. B., Topeka, Kan.
 Ringle, Wm. Edgar, A. B., Coffeyville, Kan.
 Rising, George Henry, A. B., Salina, Kan.
 Shutt, Charles Edwin, A. B., Beloit, Kan.
 Sinnott, Evangeline Mary, A. B., Lawrence, Kan.
 Smith, Richard James, A. B., Kansas City, Kan.
 Snyder, James Rodger, A. B., Augusta, Kan.
 Souder, Alvah, A. B., Newton, Kan.
 Spencer, Alice Isabelle, A. B., Helena, Mont.
 Spiers, Edward Bruce, A. B., Lawrence, Kan.
 Wagner, Charles Abertis, A. B., Minneapolis, Kan.
 Warde, Blanche, A. B., Lawrence, Kan.
 Wardner, Albert E., jr., A. B., Kansas City, Mo.
 Watson, Rachel Hammond, A. B., Lyndon, Kan.
 Wickersham, Lulu, A. B., Kearney, Neb.
 Wilder, Webster, A. B., Topeka, Kan.
 Wing, Herbert, A. B., Hutchinson, Kan.
 Zimmerman, Minnie Ella, A. B., Abilene, Kan.

Normal Department.

Class of 1877.

Beckey, Mary Murphy, B. D., Linwood, Kan.
 Brannen, Mary A., B. D., Tonganoxie, Kan.
 Burbank, Ann Elizabeth, B. D., Leavenworth, Kan.
 Cahlan, Charlotte Warren, B. D., ———.
 Carter, Almira Wood, B. D., Lawrence, Kan.
 Davidson, Lizzie Stanley, B. D., Hesper, Kan.
 Foster, Alla Barnes, A. B., B. D., 420 College street, Washington, D. C.
 Floden, Karl A., A. B., B. D., Hanford, Cal.
 Garrett, Eudora Wade, M. S., B. D., Lawrence, Kan.
 Harvey, Henry S., B. D., Baxter Springs, Kan.
 Miller, Mary Dillon, B. D., Council Grove, Kan.
 Woodard, Annie Varney, B. D., Lawrence, Kan.
 Vaughn, Emeline Upton, B. D., Leavenworth, Kan.

Class of 1879.

Granger, Ella Pearson, B. D., Phillipsburg, Kan.
 Prentiss, Frank, B. S., B. D., Ph. G., Colorado Springs, Colo.
 Smith, Samuel M., A. B., B. D., Fort Worth, Tex.
 Wallace, Alma Richardson, A. B., B. D., Hermosa, Colo.

Class of 1880.

Austin, Jessie A., A. B., B. D., ———.
 Chase, Henry V., B. S., B. D., Kansas City, Mo.
 Hill, Ellen, B. D., Pasadena, Cal.
 Hitchins, Bion S., A. B., B. D., Ponca City, Okl.
 Parker, Alfred E., B. S., B. D., Wellington, Kan.
 Raymond, Helen Bay, A. B., B. D., Terrace Place, Troy, N. Y.
 Spray, Abbie Coltrane, B. D., Tonganoxie, Kan.
 Watson, Carrie M., A. B., B. D., Lawrence, Kan.

Class of 1881.

Farr, Lizzie Flora, B. D., Independence, Mo.
 Hawkins, Charles Dana, B. D., Fort Scott, Kan.
 Haworth, Rosetta, B. D., North Branch, Kan.
 Moore, Anna Lydia, B. D., Spring Hill, Kan.
 Presby, Mary Gamble, B. D. (Deceased.)
 Spangler, Caroline Baumann, B. D., Lawrence, Kan.
 Upton, Charles Green, B. S., B. D., 2306 Jarboe street, Kansas City, Mo.

Class of 1882.

Kempthorne, Ella, B. D., ———.
 Parker, Mary Belle, B. D., Altoona, Kan.
 Spray, Lindley Murray, A. B., B. D., Tonganoxie, Kan.
 Stanley, Emery Frederick, B. D., Lawrence, Kan.

Class of 1883.

Clark, Frank Howard, B. D., Aspen, Colo.
 Coltrane, Ella, B. D., Albuquerque, N. M.
 Coyle, Chloe Haworth, B. D., Galena, Kan.
 Davis, Mary Ann, B. D., ———.
 Gano, Eveoline, B. D., Kansas City, Mo.
 Little, Edward C., A. B., B. D., Lieut-Col., Twentieth Kansas U. S. V.
 Miller, Glen Lewis, A. B., B. D., Utah Nat'l Bank, Salt Lake City, Utah.
 Murphy, Ann Eliza, B. S., B. D., Topeka, Kan.
 Rose, George Earle, B. D., Kansas City, Kan.
 Shearer, John Lincoln, B. D., Bunker Hill, Kan.
 Whirlow, Wm. S., B. S., B. D., Kingfisher, Okl.
 Wilcox, Mina Marvin, M. A., B. D., Lawrence, Kan.

Class of 1884.

Alison, Cora Henshaw, B. D., Danville, Ill.
 Boles, Nettie Hubbard, B. S., B. D., 832 East Colfax avenue, Denver, Colo.
 Clark, Phebe Ashley, B. D., Aspen, Colo.
 Cowdrick, Eugene L., B. D., Russell, Kan.
 Halstead, Eva, B. D., Reno, Kan.
 Jay, Minnie Clark, B. D., Indianola, Kan.
 Johnson, Wm. H., A. M., B. D., Helena, Mont.
 Metcalf, Charles Samuel, B. D., 3151 California street, Denver, Colo.
 Newby, Elma, B. D., ———.
 Pierson, Augusta, B. D., Fort Scott, Kan.
 Scott, Emma Kempthorne, B. D. (Deceased.)
 Smith, Margaret Hemphill, B. D., Wellington, Kan.
 Smyth, Lula Miller, B. D., White Cloud, Kan.
 Templin, Olin, A. M., M. S., B. D., Lawrence, Kan.

Class of 1885.

Black, Harriett Alice, B. D., ———.
 Briggs, Ada Eleanor, A. M., B. D., Lawrence, Kan.
 Bruce, Blanche Ketene, A. B., B. D., Leavenworth, Kan.
 Cook, Samuel Marion, A. B., B. D., Kansas City, Mo.
 Divelbess, Jennie, B. D., Big Springs, Kan.
 Eddy, Flora Belle, B. D. (Deceased.)
 Field, Millard Lincoln, B. D., Topeka, Kan.
 Greenameyer, Clara, B. D., Kansas City, Mo.
 Highbargin, Anna Loy, B. D., Cripple Creek, Colo.
 Hulick, Harriett Clark, B. S., B. D., Chicago, Ill.
 Martin, Hiram Barton, B. D., Mt. Pleasant, Kan.

Pierson, Matthew Edgar, B. D., Kansas City, Kan.
Rote, John Paul, A. B., B. D., San Antonio, Tex.
Starr, Ida Wade, B. D., Lawrence, Kan.
Thompson, Martha Alice, A. B., B. D., Lawrence, Kan.
Whitehill, Harriett Williams, A. B., B. D., Boston, Mass.

School of Engineering.

Organized in 1891. Graduates preceding that date are given under School of Arts.

Class of 1891.

Rutledge, Robert Anderson, B. C. E., Florence, Colo.

Class of 1892.

Caldwell, Eugene Wilson, B. S., 315 Fifth avenue, New York city.
Frederick, Charles Warnock, B. S., Lawrence, Kan.
Ridgeway, Arthur Osborne, B. S., Pueblo, Colo.
Robinson, John M., B. S., Lanesville, Webster Parish, La.

Class of 1893.

Babbitt, Dennett Elijah, B. S., Larned, Kan.
Blaker, Earnest, B. S., Cornell University, Ithaca, N. Y.
Brayton, Wm. Lestor, B. S., Pennsylvania Steel Company, Philadelphia, Pa.
Curry, John Edward, M. S., C. E., Winchester, Kan.
Ringer, Frank, B. S., Missouri, Kansas & Texas railway, St. Louis, Mo.
Rodgers, Roy Roscoe, B. S., Schenectady, N. Y.
Templin, Dana, M. S., 201 Garfield avenue, Kansas City, Mo.

Class of 1894.

Carter, Richard William, B. S., Trenton, N. J.
Duffee, Lloyd, B. S., Lawrence, Kan.
Johnson, Herbert Henry, B. S., ———.
Kutz, Wm. Henry, B. S., Madison, Iowa.
Ludlow, Alfred Douglass, B. S., city engineer's office, Kansas City, Mo.
Topping, Alanson Niles, B. S., Lawrence, Kan.

Class of 1895.

Cracraft, John Penn, B. S., Chicago, Ill.
Craig, Arthur Ulysses, B. S., Tuskegee, Ala.
Cunningham, Arthur Wm., B. S., St. Louis, Mo.
Harding, James Judson, B. S., Chicago, Ill.
Herrington, George Thomas, B. S., Lawrence, Kan.
Herrington, John Lyle, B. S., C. E., Milwaukee Bridge Co., Milwaukee, Wis.
Kelsey, James Cezanne, B. S., Northwestern Telephone Exch., Minneapolis, Minn.
Kitzmiller, Charles Jacob, B. S. (Deceased.)
Lahmer, John Alouis, B. S., Mena, Ark.
Landis, Hugh Graham, B. S., Wichita, Kan.
Newton, Ned Earnest, B. S., Hiawatha, Kan.
Soxman, George Meade, B. S., Salina, Kan.
Williamson, Orah Kilburn, B. S., Edwardsville, Kan.
Withington, Henry Jay, B. S., Chicago Theological School, Chicago, Ill.

Class of 1896.

Albers, George Rockwell, B. S., Bradley Institute, Peoria, Ill.
Armor, Charles W. L., B. S., Fort Smith, Ark.

Crew, Charles Corwin, B. S., Alaska.
 Daniels, Frederick Percy, B. S., Girard, Kan.
 Morscher, Lawrence Norton, B. S., Lawrence, Kan.
 Schroder, Albert Vincent, B. S., Topeka, Kan.
 Squire, Wm. John, B. S., St. Louis, Mo.
 Wagner, Henry Wm., B. S., Newton Kan.

Class of 1897.

Anderson, Frederick Elmer, B. S., ———.
 Brooks, Walter Thompson, B. S., Kansas City, Mo.
 Cox, Herbert Frederic, B. S., Fort Bayard, N. M.
 Fletcher, Charles Wm., B. S., Schenectady, N. Y.
 Hancock, Wm. Luther, B. S., Grass Valley, Cal.
 O'Neill, W. Roscoe, B. S., St. Louis, Mo.
 Unwerth, Hans von, B. S., Kansas City, Ft. Scott & Memphis Rld., Kansas City, Mo.
 Wise, Alfred J., B. S., Lawrence, Kan.

Class of 1898.

Campbell, James Edgar, B. S., Chicago, Ill.
 Canavan, Asa Lord, B. S., Horton, Kan.
 Clark, Harry G., B. S., A. T. & S. F. railroad, Newton, Kan.
 Clark, Herbert Anthony, B. S., Cottonwood Falls, Kan.
 Galbreath, Wm. Otto, B. S., Utica, Mo.
 Gilmore, Frank Lansing, B. S., Lawrence, Kan.
 Haggart, Cecil Neil, B. S., M. K. & T. railroad, Parsons, Kan.
 Hoad, Wm. Christian, B. S., A. T. & S. F. railroad, Oklahoma.
 Jio, Mamoru, B. S., Lawrence, Kan.
 Kraus, Charles August, B. S., Lawrence, Kan.
 Lee, John Merrill, B. S., Wichita, Kan.
 Macomb, John Navarre, jr., M. S., Pittsburg, Kan.
 Myers, Alfred Mayer, B. S., Pennsylvania Steel Company, Philadelphia, Pa.
 Norton, Edwin Willett, B. S., St. Louis, Mo.
 Sanderson, J. C., B. S., Rich Hill, Mo.
 Sears, Thomas Bartlett, B. S., Mena, Ark.
 Walker, Wm. Tecumseh, B. S., Kansas City, Mo.
 Watson, Malcolm Van, B. S., Kansas City, Mo.

School of Law.

OFFICERS OF ALUMNI ASSOCIATION.

R. E. HAYDEN, '98,	President.
A. M. JACKSON, '97,	Vice-President.
J. H. MITCHELL, '93,	Secretary and Treasurer.

Class of 1880.

DeGross, George M., Vineland, N. J.
 French, Rufus A., Lawrence, Kan.
 Kennedy, Thomas H., Kansas City, Mo.
 Larimer, Frank E. (Deceased.)
 Neill, Will J., Chicago, Ill.
 Perkins, Lucius H., Lawrence, Kan.
 Usher, Samuel C., Lawrence, Kan.
 Yates, George W. W., Topeka, Kan.

Class of 1881.

Barr, Leo James. (Deceased.)
Duff, Walter Mackey, Denver, Colo.
Hayes, Arthur Lewis, Olathe, Kan.
Surface, Benjamin Franklin, Belleville, Kan.

Class of 1882.

Cornforth, Arthur, Durango, Colo.
Gray, Joseph Mallen. (Deceased.)
Harlow, John Thomas. (Deceased.)
Haskins, Charles Augustus, Marion, Kan.
Richmond, Thomas F., Smithport, Pa.

Class of 1883.

Burney, William L. P., Warsaw, Mo.
Cooper, Ernest J., Kansas City, Mo.
Goodin, Edwin Delmar. (Deceased.)
Wells, Numa Wesley, Paola, Kan.

Class of 1884.

Davis, Leander L., Kansas City, Mo.
Exline, Frank, Newkirk, Okl.
Foley, Charles Frederick, Lyons, Kan.
Major, James F., Denver, Colo.
Marlin, Francis Wylie, Carmi, Ill.
Marquis, Harry Miller, Osceola, Neb.
Shinkle, Ezra McCord, Greensburg, Kan.
Smith, Howard Trego. (Deceased.)

Class of 1885.

Boor, Van Fremont, Kansas City, Mo.
Davis, James N., Portland, Ore.
Hutcheson, James Alexander, Olathe, Kan.
Rigby, Isaac, Concordia, Kan.
Spangler, William Cornelius, Lawrence, Kan.
Turner, Joseph Richard, Deming, N. M.
Wilson, Joshua, Waterloo, Ill.

Class of 1886.

Albach, John Henry, Lawrence, Kan.
Ballinger, Harry, Portland, Ore.
Brownell, William Baldwin, Lawrence, Kan.
Hall, John William. (Deceased.)
Hartley, Elmer Ellsworth, Hoxie, Kan.
Hutchings, Frank Day, Kansas City, Kan.
Little, Edward Campbell, Manila, P. I., Lieut.-Col. Twentieth Kansas U. S. V.
Scott, Walter W., Oklahoma City, Okl.
Stevens, Walter Cyrenus, Hennessey, Okl.
Talbot, Benjamin Franklin, Atchison, Kan.
Van Vliet, James Booth, Frankfort, Kan.

Class of 1887.

Blair, Robert Woods, Topeka, Kan.
Bradley, Isaac Francis, Kansas City, Kan.
Crew, Dan Andrew. (Deceased.)
Dickerson, Joseph Thomas, Marion, Kan.

Frolick, George Wendle, Kansas City, Mo.
Harris, James Buchanan, Kansas City, Kan.
Hutchins, Benj. F., West Superior, Wis.
Jackson, William Jay, Coldwater, Kan.
Miller, John Groff, Spokane, Wash.
Moore, Samuel W., Kansas City, Mo.
Pentzer, Frederick S., Wilton, Iowa.
Sullivan, John, Kansas City, Mo.

Class of 1888.

Fidler, Alfred, Kansas City, Mo.
Gilmore, Solon Thacher, Kansas City, Mo.
Harbaugh, Charles Ellsworth, Erie, Kan.
Jackson, William Anthony, Atchison, Kan.
Jacobs, Benjamin, Kansas City, Kan.
King, Sterling Price, Stillwater, Okl.
Palmer, David Emory, Topeka, Kan.
Peairs, Howard A., Los Angeles, Cal.
Rice, Emery Scott, Smith Center, Kan.
Roberts, John William, Hutchinson, Kan.
Wolley, William Staples, Liberal, Kan.

Class of 1889.

Bishop, Samuel D., Lawrence, Kan.
Earhart, Edwin S., Kansas City, Kan.
Enns, Cornelius Martin, Kansas City, Mo.
Finfrock, Willis Harry, Los Angeles, Cal.
Gray, Lee Moore, Hennessey, Okl.
Harrington, Grant Woodbury, Hiawatha, Kan.
Hobbs, Bruno, Kansas City, Kan.
Horton, Richard Scott, Omaha, Neb.
McIlravy, John Wilbur, Kansas City, Mo.
Mitchell, Alexander Clark, Lawrence, Kan.
Nelson, William Thomas, Omaha, Neb.
Pollock, Thomas Allen, Kansas City, Kan.
Shuman, Jesse Clayton, Marion, Kan.
Spoonier, Lee C., St. Louis, Mo.
Stebbins, Louis Abyram, Topeka, Kan.
Wayde, John Martin, Pittsburg, Kan.

Class of 1890.

Ackley, Ernest L., Concordia, Kan.
Butterworth, Cranston W., Girard, Kan.
Caughey, Albert, Horton, Kan.
Coy, Daniel J., Glen Elder, Kan.
Edminster, Porter. (Deceased.)
Farrow, Charles, Carthage, Mo.
Flannelly, Thomas J., Chetopa, Kan.
Herdman, Robert E. Lee, Omaha, Neb.
Herdman, William Henry, Omaha, Neb.
Hill, Howard M., Fredonia, Kan.
Houk, Russell Whitelaw, Galveston, Tex.
Lawton, Wallace W., Osceola, Mo.
Leib, Thomas D., Topeka, Kan.
Littick, Joseph G., Kansas City, Kan.
Mallison, Daniel, Kansas City, Kan.
Merriam, Frank D., Topeka, Kan.
Nichols, James, Madison, Neb.

Poehler, Louis C., Lawrence, Kan.
Power, Frank M., Archer City, Tex.
Russ, William W., Lawrence, Kan.
Simons, Perry C., Caldwell, Kan.
Wallis, Charles W., Madison, Neb.
Westcott, Seba C., Galena, Kan.
Wilmoth, Alva L., Concordia, Kan.

Class of 1891.

Boucher, John Hames, Omaha, Neb.
Bower, Clifford D., Boise City, Idaho.
Brown, Ella White, Holton, Kan.
Cunkle, Austin Curtis, Fort Smith, Ark.
Downing, Edward Christopher, Abilene, Kan.
Finical, Thomas Anderson, Albuquerque, N. M.
Finney, Edward C., Washington, D. C.
Flint, James Ammie, Lawrence, Kan.
Foster, William Andersen, Omaha, Neb.
Graham, Alvah John, Winfield, Kan.
Guttierrez, Francisco A., Albuquerque, N. M.
Jaquith, Brett Wendell, Emporia, Kan.
Jones, David Lewis, Garnett, Kan.
King, Preston Rufus, Kansas City, Mo.
Mack, Judah Lincoln, Lincoln, Neb.
McLaughlin, John Paxton, Osage City, Kan.
Mertz, John Wesley, Garnett, Kan.
Palm, William Ludovic, Denver, Colo.
Sears, William Henry, Washington, D. C.
Starkey, Walter Herbert. (Deceased.)
Stowell, John, Seneca, Kan.
Townsend, William B., Leavenworth, Kan.
Webster, Arthur Gordon, Peabody, Kan.

Class of 1892.

Armstrong, Herbert Lawrence, Topeka, Kan.
Bessey, Elmer Seward, Claremore, I. T.
Blume, Jarvis Amos, Chicago, Ill.
Caldwell, Eldie Franklin, Lawrence, Kan.
Casner, Fred. Walter, Hutchinson, Kan.
Cline, William Sherman, Newkirk, Okl.
Fisher, Edward Reuben, Kansas City, Kan.
George, Jesse, Leavenworth, Kan.
Glenn, Albert Carey, Jefferson, Okl.
Graham, Frank L., Lansing, Kan.
Hamilton, Clad, Topeka, Kan.
Hellstrom, Frank Oscar, Fargo, N. D.
Jackson, Fred. S., Eureka, Kan.
Jaquith, Roscoe Howard, Emporia, Kan.
Jewett, Frank George, Severy, Kan.
Jones, John Jackson, Chanute, Kan.
Lamm, Orrin Jacobs, Kansas City, Mo.
Lookabaugh, Ira Holmes, Watonga, Okl.
May, Andrew Jackson, Lecompton, Kan.
Pennington, William A., Kansas City, Mo.
Price, Isaac Atson, Phoenix, Ariz.
Ridings, Samuel Pettijohn, Jefferson, Okl.
Russell, Benjamin Milroy, Hiawatha, Kan.
Stanley, James Rudolph, Wakarusa, Kan.

Stillwell, Ernest Quincy, Neosho Falls, Kan.
Sullivan, Thomas McClellan, ———.
Swartzell, Philip Logan, Elk City, Kan.
Walker, James Amzi, Lerna, Ill.
Wilson, Dennis H., Coffeyville, Kan.

Class of 1893.

Boyce, Fred. Devere, Minneapolis, Kan.
Bronson, Solomon Ernest, Ozark, Mo.
Byrne, James Lancaster, St. Mary's, Kan.
Crawford, Bryce, Omaha, Neb.
Dias, William Thomas, Lawrence, Kan.
Dunn, Jesse James, Alva, Okl.
Ellis, George Washington, Lawrence, Kan.
Finley, Gordon Louis, Enid, Okl.
Gray, Walter Evans, Lawrence, Kan.
Hamer, Robert Morton, Emporia, Kan.
Herr, Abraham Lincoln, Kiowa, Kan.
Hill, Frederick Prosser, Enid, Okl.
Hines, George Luther, Kansas City, Mo.
Hopkins, Edward Everett, Kansas City, Mo.
Kennedy, Charles Todd, Lawrence, Kan.
Kirk, Lester, Garnett, Kan.
Lawson, James Francis, Hutchinson, Kan.
Locke, Charles Aubrey, Belvue, Kan.
Mahew, Leonard Thomas, Centralia, Kan.
Mason, Lawrence James, Kansas City, Kan.
McClintock, William Starrett, Topeka.
McGrath, Robert William, Fredonia, Kan.
McKinley, Guy Connolly, Neosho Falls, Kan.
Mitchell, James Hamilton, Lawrence, Kan.
Morgan, Chancellor T., Durango, Colo.
Munt, Arthur William, Cherryvale, Kan.
Parrott, Phillip Ernest, Kansas City, Mo.
Pleasant, Walter James, Ottawa, Kan.
Rankin, Jabez Otterbein, Kansas City, Kan.
Reeks, William Joseph, Topeka, Kan.
Rush, John Andrew, Denver, Colo.
Sears, Clarence Houden, Chillicothe, Ohio.
Sharpe, Alvin Verling, Lawrence, Kan.
Stephens, Charles, Columbus, Kan.
Sturgeon, Henry L., Kansas City, Mo.
Swarens, Clarence Christopher, Shields, Kan.
Swarens, Frank Roy, Lawrence, Kan.
Tatman, Ernest Wright, Topeka, Kan.
Weatherby, Albert Thaine, Utica, Mo.
Wells, Ira Kent, Seneca, Kan.
West, Fred. Columbus, Lawrence, Kan.
Wolf, George Weldon, Lyndon, Kan.

Class of 1894.

Bennett, Thomas Drew, Phoenix, Ariz.
Brooks, William, Kansas City, Mo.
Campell, R. E., South McAlester, I. T.
Challiss, James Milbank, Atchison, Kan.
Cox, Albert Thompson, Independence, Kan.
Cox, Iraton Everett, Independence, Kan.
Cranston, Arthur Fulton, Parsons, Kan.

Davidson, Walter P., Kansas City, Mo.
Dempsey, Aloysius E., Leavenworth, Kan.
Evans, Edward Robert, Lebo, Kan.
Foulks, Jesse Carl, Topeka, Kan.
Harmon, Pliny Marcus, Clifton, Kan.
Higgins, William E., Lawrence, Kan.
Hilton, Joseph Harry, Effingham, Kan.
Holmes, Jacob Madison, Beloit, Kan.
Humphrey, Charles F., San Francisco, Cal.
Lees, Essington Herbert, Sterling, Kan.
Melvin, Rufus Edmund, Lawrence, Kan.
Miller, Albert Russell, Salida, Colo.
Morgan, Schuyler Colfax, Durango, Colo.
Norton, Thomas James, Chicago, Ill.
Orr, Jas. Alexander, Colorado Springs, Colo.
Parke, Leonard A., Lyndon, Kan.
Peters, John Fred., Oberlin, Kan.
Phillips, Mrs. May, Lawrence, Kan.
Railsback, Walter E., Kansas City, Kan.
Rains, Oscar, Osawkie, Kan.
Salathiel, Thomas S., Independence, Kan.
Shaffer, Joseph, Hays City, Kan.
Sproul, Wm. Henry Harrison, Sedan, Kan.
Strosnider, John, Havensville, Kan.
Wellman, Ernest Pratt, Berkeley, Cal.

Class of 1895.

Bennett, Edgar, Linn, Kan.
Bennett, John Allison. (Deceased.)
Blake, John Ellsworth, Leavenworth, Kan.
Brady, Francis Milligan, Chetopa, Kan. County attorney.
Buchan, Fred. Erskine, Manila, P. I., Twentieth Kansas U. S. V.
Budd, Chas. Albert, Erie, Kan.
Cann, Eli, Gold Hill, Colo.
Clarke, Fred. Adam, Lawrence, Kan.
Cramer, John Lyman, 194 South Clinton street, Chicago, Ill.
Eaton, Dudley W., Kansas City, Mo.
Ferbrache, Presley E., Springfield, Mo.
Fleming, Frank Fabius, Abilene, Kan.
Galvin, Charles Herbert, Stockton, Kan.
Gorrill, Marshall Alexis, Lawrence, Kan.
Greene, William Philip, Lawrence, Kan.
Hawkins, Wm. Marshall, Topeka, Kan.
Hickman, Claude V., St. Joseph, Mo.
Hildreth, John J., Newton, Kan.
Holliday, Chas. King, Topeka, Kan.
Jackson, Charles Francis, Odessa, Mo.
Johnson, John Martin, Robinson, Kan.
Kerrigan, John Francis, Hiawatha, Kan.
Lamb, Frank Fenimore, Parsons, Kan.
Lindley, Corydon Endsley, Lawrence, Kan.
Little, John Eber, Gold Hill, Colo.
Lyngar, Otis Franklin, Pittsburg, Kan.
Means, Hugh, Lawrence, Kan. Farmer.
Mitchell, Rolla Ray, Texarkana, Tex.
Morgan, James Pleasant, De Soto, Kan.
Nichols, Galea, Topeka, Kan.
Owens, James, Cripple Creek, Colo.
Peairs, Frank Lincoln, Lawrence, Kan.

Powell, Elmer N., Kansas City, Mo.
 Prentiss, Chas. Addison, Denver, Colo.
 Richardson, Frank S., Colorado Springs, Colo.
 Ruppenthal, Jacob Christian, jr., Lucas, Kan.
 Schaeffer, Art. Bigelow, Valley Falls, Kan.
 Schreiner, Albert David, Columbus, Kan.
 Simon, Wilford Wayne, Seneca, Kan.
 Steele, James Louis, Lawrence, Kan.
 Turner, Thomas Corwin, Eureka, Kan.
 Wheeler, Frederick Benjamin, Pittsburg, Kan.
 Wilson, Charles Leighton, Lawrence, Kan.
 Winter, William Henry, Port Arthur, Tex.
 Wulfekuhler, Adolph W., Leavenworth, Kan.
 Wulfekuhler, Louis H., Leavenworth, Kan.
 Wynn, William H., jr., Des Moines, Iowa.

Class of 1896.

Beveridge, Anna May, Kansas City, Mo.
 Brady, Felix Edward, Denver, Colo.
 Chadwick, Ralph E., Lawrence, Kan.
 Clark, John Warren, Lawrence, Kan.
 Cowden, William Long, Fourth and Kansas avenue, Kansas City, Kan.
 Crowe, Isaac Franklin, Kansas City.
 Cullison, Ethelbert Howard, Galena, Kan.
 Dias, Mina Perky, Lawrence, Kan.
 Elting, Cornelius Houseman, Vinita, I. T.
 Foresman, J. Homer, Burlingame.
 Gardner, Wilbur L., 174 La Salle, Chicago, Ill.
 Gladfelter, William Burtner, Kansas City, Kan.
 Hitchcock, Jess Reynolds, Columbus, Kan.
 Hogg, Archibald, Lawrence, Kan.
 Holler, David B., Conway Springs, Kan.
 Johnson, Alexander Dow, Plsanton, Kan.
 Leonard, Calvin H., Quenemo, Kan.
 Light, Will Harrison, Topeka, Kan.
 Manley, Robert C., Lawrence, Kan.
 Mason, William Harris, Lawrence, Kan.
 McWilliams, Robt. Buchanan, Lawrence, Kan.
 Menger, Louis Herman, Lawrence, Kan.
 O'Keefe, D. J., Enid, Okl.
 Pearson, Robert Abraham, Joplin, Mo.
 Piatt, Wm. H. H., Kansas City, Mo.
 Pope, W. St. Clair, Kansas City, Mo.
 Querry, Archibald Robert, Tulsa, I. T.
 Ralston, William Chalmers, Topeka, Kan.
 Roark, Michael Edward, Junction City, Kan.
 Roark, Robert Ingersoll, Junction City, Kan.
 Rogers, William Andrew, Wamego, Kan.
 Simmons, Thomas Willard, Goodland, Kan.
 Simpson, John Andrew, Lincoln, Neb.
 Snell, William D., Kansas City, Kan., Fourth and Kansas avenue.
 Troxel, Cloyd Roscoe, Abilene, Kan.
 Tucker, John W., Cawker City, Kan.
 Watson, William James, Manila, P. I., Twentieth Kansas U. S. V.

Class of 1897.

Alford, Alfred Cecil. (Deceased.)
 Anderson, William Alex., Emporia, Kan.
 Ashwill, Eugene, Leavenworth, Kan.

Bates, Albert B., Kansas City, Mo.
Beirly, Greene Wyclif, Garnett, Kan.
Blackshere, Harold Marion, Elmdale, Kan.
Breese, Ralph Braden, Cottonwood Falls, Kan.
Brooks, Leonard, Sedan, Kan.
Burney, Clarence A., Kansas City, Kan.
Caldwell, John William, Kansas City, Mo.
Campbell, Robert Bruce, Fort Scott, Kan.
Clarke, Adna Girard, Manila, P. I., Twentieth Kansas U. S. V.
Cooper, George Gregg, Kansas City, Mo.
Cornelius, Alpheus William, Chicago, Ill.
Crum, Arlon Bertram, Burlingame, Kan.
Edmundson, Warren Hayes, Oswego, Kan.
Ferrel, Lewis G., Olathe, Kan.
Freeland, William Merton, Paola, Kan.
Gates, Alvin, Wakefield, Kan.
Gernon, Nicholas Andrew, Russell, Kan.
Harley, Thomas, Lawrence, Kan.
Henshaw, Barclay William, Lawrence, Kan.
Hillman, Pines, St. Joseph, Mo.
Hoover, William Christopher, Columbus, Kan.
Huffman, Clarence Dwight, Pittsburg, Kan.
Jackson, Arthur Milton, Leavenworth, Kan.
Jacobs, James Franklin, Kansas City, Kan.
Lamb, Henry A. (Deceased.)
Lewis, John Meriman, Kansas City, Kan.
Limbocker, Myron Arthur, Kansas City, Mo.
Magaw, Charles Albert, Topeka, Kan.
Martindale, George William, Emporia, Kan.
McCain, Eugene Lewis, Emporia, Kan.
Metcalf, Wilder Stevens, Manila, P. I., Twentieth Kansas U. S. V.
Miller, Clyde Winwood, Osage City, Kan.
Miller, Waren Gus, Minneapolis, Kan.
O'Keefe, Daniel Joseph, McAlester, I. T.
Parks, Isaac Kane, South Bend, Ind.
Parks, Wade Roscoe, Bonita, Kan.
Paul, Clarence Herbert, Waterville, Kan.
Phillips, Oliver C., Leavenworth, Kan.
Pope, Horace Greeley, Kansas City, Mo.
Robinett, Edward Kelley, Kansas City, Kan.
Schmitz, Oscar, Alma, Kan.
Sherman, Adrian Fisher, Topeka, Kan.
Sherman, Guy, Hiawatha, Kan.
Slawson, Marion G., Girard, Kan.
Spellman, Clarence I., Kansas City, Mo.
Tate, Sidney Swanwick, Kansas City, Kan.
Trinkle, Henry Oscar, La Cygne, Kan.
Wagstaff, Thomas Edward, Lawrence, Kan.
Wells, Robert Wesley, Washington, D. C.
Wilson, Palmer Stanton, Topeka, Kan.
Wourms, John Henry, Newton, Kan.

Class of 1898.

Allen, George R., LL. B., Atchison, Kan.
Bennett, Alberta M., LL. B., Iola, Kan.
Bettis, George Mitchell, LL. B., Oswego, Kan.
Bolinger, Harry Albert, LL. B., Fort Scott, Kan.
Brown, Ray Ambrose, LL. B., Junction City, Kan.
Bryant, Wellington Walton, LL. B., Salina, Kan.

Bulger, James Joseph, LL. B., Keelville, Kan.
Burdick, Cary Lovell, LL. B., Carbondale, Kan.
Cheatham, William Leon, LL. B., Richmond, Kan.
Cline, Wesley Burton, LL. B., La Cygne, Kan.
Corwin, Thomas Montgomery, LL. B., Topeka, Kan.
Cranmer, George Fenimore, LL. B., Dover, Kan.
Cranmer, Jennie, LL. B., Dover, Kan.
Cronk, William Lonzo, LL. B., Castle, Mont.
Davis, Harry Glenn, LL. B., Chetopa, Kan.
Dickey, William Clayton, LL. B., Leoti, Kan.
Dunn, Joseph Foster, LL. B., Ellinwood, Kan.
Eckman, David Miller, LL. B., Troy, Idaho.
Ellis, Fred Roscoe, LL. B., Medicine Lodge, Kan.
Foulks, Albert Sidney, LL. B., San Francisco, Cal.
French, A. Markle, LL. B., Jamestown, Kan.
Games, John Ira, LL. B., Baldwin, Kan.
Games, Moses William, LL. B., Baldwin, Kan.
Gear, Dale Dudley, LL. B., Kansas City, Mo.
Griffin, Samuel, LL. B., Medicine Lodge, Kan.
Hamill, Bertrand Dewey, LL. B., Wakarusa, Kan.
Hamon, Jake Lewis, LL. B., Sedan, Kan.
Hancock, Benjamin Harvey, LL. B., Stanley, Kan.
Harris, Fred Milo, LL. B., Ottawa, Kan.
Hayden, George P., LL. B., Wetmore, Kan.
Hayden, Richard F., LL. B., Wetmore, Kan.
Holdren, Joseph W., LL. B., Spring Hill, Kan.
House, Frank E., LL. B., A. B., Lawrence, Kan.
Jackson, Thomas, LL. B., Waverly, Kan.
Julian, Charles Clifton, LL. B., Cherryvale, Kan.
Kelly, Simpson, LL. B., Porterville, Kan.
Kimpton, Carl E., LL. B., A. B., Netawaka, Kan.
Kitchell, William H., LL. B., Topeka, Kan.
Kretsinger, William Samuel, LL. B., Emporia, Kan.
Layton, Walter Adonis, LL. B., Axtell, Kan.
Little, Chancy B., LL. B., Olathe, Kan.
Lloyd, Joseph Lewis, LL. B., Galena, Kan.
Markley, Jacob, LL. B., Willow Springs, Kan.
Metsker, James Wallace, LL. B., Le Roy, Kan.
Morgan, Edwin B., LL. B., Princeton, Kan.
McKay, Frank J., LL. B., Girard, Kan.
McLaughlin, Harry W., LL. B., Arkansas City, Kan.
McVicar, Dana Collins, LL. B., Topeka, Kan.
Neihart, Cassius Tyndall, LL. B., Carbondale, Kan.
Noyes, Alfred Harvey, LL. B., Denver, Colo.
Olston, Herman A., LL. B., Axtell, Kan.
Pitman, Frank Leslie, LL. B., Louisburg, Kan.
Rafter, Myron De Vere, Manila, P. I., Twentieth Kansas U. S. V.
Reed, HESSIE M., LL. B., Kansas City, Mo.
Reeder, Charles Ward, LL. B., Troy, Kan.
Saylor, Burton Emory, LL. B., Sabetha, Kan.
Sherman, Glen, LL. B., Seneca, Kan.
Simpson, Ernest Guy, LL. B., Manila, P. I., Twentieth Kansas U. S. V.
Sloan, Arthur Collins, jr., LL. B., Colorado Springs, Colo.
Speak, Fred, LL. B., Kansas City, Kan.
Spencer, May Hotchkiss, LL. B., Lawrence, Kan.
Stanley, Claudius Chalmers, LL. B., Wichita, Kan.
Stewart, Samuel Vernon, LL. B., Waverly, Kan.
Strawn, Samuel Morris, LL. B., Valley Falls, Kan.
Street, Arthur Leonard Howell, LL. B., Neodesha, Kan.

Thomas, Charles, LL. B., Republic, Kan.
 Townner, Charles Clifford, LL. B., Mankato, Kan.
 Van Meter, Morris Vain, LL. B., Wellsville, Kan.
 Van Meter, Will J., LL. B., Parsons, Kan.
 Wall, Nathaniel Anthony, LL. B., Solomon, Kan.
 Wilcox, Alonzo D., LL. B., Muscotah, Kan.
 Wolfe, W. Clyde, LL. B., Wilson, Kan.

School of Fine Arts.

Class of 1881.

Kempthorne, Ella, Beloit, Kan.

Class of 1883.

Breck, Susa Hubbard, Lawrence, Kan.
 Mellon, Lillian Bell, ———.

Class of 1887.

Gleed, Mabel Gore, M. G., Mus. B., Topeka, Kan.

Class of 1888.

Atwood, Bertha Nellie, M. G., Springfield, Mo.
 Ropes, Alice Haywood, M. G., St. Charles, Mo.

Class of 1889.

Manning, John Crogan, M. G., care of Mason & Hamlin, Boston, Mass.

Class of 1892.

Bell, Ida Burr, Mus. B., Lawrence, Kan.
 Chapman, Manie Johnston, Mus. B., Eleventh and Troost streets, Kansas City, Mo.
 Hinman, Lillie May, M. G., Concordia, Kan.
 Lichtenwalter, E. Geneve, Mus. B., Lawrence, Kan.
 Orton, Daisy, Mus. B., White Cloud, Kan.
 Springer, Helen Wynne, M. G., 1310 North Sixth street, Tacoma, Wash.
 Taggart, Nina Jacqueline, M. G., Walton, Kan.
 Weller, Jennie M., Mus. B., New England Conservatory of Music, Boston, Mass.
 Wynn, Alice, M. G., Lawrence, Kan.

Class of 1893.

Berry, Mary Norris, Mus. B., Grand avenue and Olive street, St. Louis, Mo.
 Curry, Juliet Titsworth, Mus. B., Linesville, Pa.
 Hinman, Lillie May, Mus. B., Concordia, Kan.
 Hood, Jessie, M. G., Nortonville, Kan.
 Kaufman, Sarah, Oklahoma.
 Oatman, Alice *Whitman*, M. G., Lawrence, Kan.
 Smith, Louise Tunncliff, Mus. B., 227 Miami street, Leavenworth, Kan.

Class of 1894.

Litchfield, Alice Lewetle, B. P., Lawrence, Kan.
 Pierson, Olive, B. P.

Class of 1895.

Bundy, Annie M. Parry, Mus. B., Topeka, Kan.
 Clark, Sarah Elizabeth *Lingard*, Mus. B., Ottawa, Kan.
 Gressinger, Harriet Mary, Mus. B., Lawrence, Kan.
 Noyes, Abbie Merriman, Mus. B., Lawrence, Kan.

Olds, Ulla Dell, B. P., 603 Delaware street, Kansas City, Mo.
 Simmons, Lillian Belle, B. P., Lawrence, Kan.
 Soxman, Clara Belle, Mus. B., Marion, Kan.
 Wilson, Mattie Lulu, Mus. B., Lawrence, Kan.

Class of 1896.

Crew, Mary Katherine, B. P.
 Drake, Anna Adelia, Mus. B., Kansas City, Kan.
 Reeder, Mary, Mus. B., Troy, Kan.
 Riddle, Mary Eleanor, B. P., Lawrence, Kan.

Class of 1897.

Brown, Mattie L., Mus. B., Piper, Kan.
 Lapham, Olive Agnes, Mus. B., Chanute, Kan.
 Marshall, Elvis Collett, Mus. B., El Dorado, Kan.
 McCheyne, Gertrude Muriel, Mus. B., 413 Whittier Place, Kansas City, Mo.
 Righter, Julia Louise, Mus. B., Lawrence, Kan.
 Skofstad, Lottie Blanche, Mus. B., Lawrence, Kan.
 Spaulding, Gertrude Mary, Mus. B., Lawrence, Kan.
 Starr, Daisy Olive, Mus. B., Topeka, Kan.
 Whitaker, Bertha Gertrude, Mus. B., New Zealand.
 Wiedemann, Louise Augusta, Mus. B., Lawrence, Kan.

Class of 1898.

Boyles, Kate, Mus. B., Lawrence, Kan.
 Fisher, Mabel Annie, Mus. B., Kansas City, Mo.
 Ireton, Della, Mus. B., Lawrence, Kan.
 Miller, Florence Maud, Mus. B., Pratt, Kan.
 McShea, Maude Isabelle, Mus. B., Junction City, Kan.
 Pampel, Carrie Electa, Mus. B., Centralia, Kan.
 Thrasher, Sara Emily, B. P., San Francisco, Cal.
 Welch, Mary, B. P., Burrton, Kan.

School of Pharmacy.

Class of 1886.

Fox, Edward Bayless, Ph. G. (A. M. Highland University). Washington, Kan.
 Raymond, Harry Legate, Ph. G. Lawrence, Kan.
 Wyler, Carl Lewis, Ph. G. Galveston, Tex.

Class of 1887.

Applebaugh, Harry Perry, Ph. G. Solomon City, Kan.
 Daily, Charles C., Ph. G. 1103 Sixteenth street, Denver, Colo.
 Deford, John Henry, Ph. G. (Deceased.)
 Dick, William Scott, Ph. G. Lawrence, Kan.
 Highbargin, Claude Britton, Ph. G. Cripple Creek, Colo.
 Hoadley, Clarence Remsen, Ph. G. Lawrence, Kan.
 Lindley, Corydon Endsley, Ph. G. Lawrence, Kan.
 Lindsay, Samuel Watts, Ph. G. A. T. & S. F. hospital, Topeka, Kan.
 O'Donnell, Martin, Ph. G. Topeka, Kan.
 Prentiss, Frank, B. S., Ph. G. Canon City, Colo.
 Sexton, Charles Loyal, Ph. G. San Diego, Cal.
 Smith, Andrew Jackson, Ph. G., M. D. Leavenworth, Kan.
 Wood, Thomas Herbert, Ph. G. 501 Kansas ave., Kansas City, Kan.
 Wulfekuhler, Albert Frederick, Ph. G. Leavenworth, Kan.

Class of 1888.

Abbey, Frank Lincoln, Ph. G. Newton, Kan.
 Albach, William Clarence, Ph. G. Falls City, Neb.
 Herrold, Herbert M., Ph. G. 232 Rialto building, Kansas City, Mo.
 McClure, Robert James, Ph. G. Los Angeles, Cal.
 McLaren, George, Ph. G. Atchison, Kan.
 Rankin, Ernest R., Ph. G., ———.
 Rice, Mary Antoinette, A. B., Ph. G., Lawrence, Kan.
 Root, John Williams, Ph. G. Pueblo, Colo.
 Spencer, Charles Borden, Ph. G. Iola, Kan.
 Topping, Arthur Ellsworth, Ph. G. Overbrook, Kan.
 Weida, George Francis, B. S. (Ph. D. John Hopkins). Manhattan, Kan.

Class of 1889.

Hill, Bradford Loring, Ph. G. Olympia, Wash.
 Hilton, Willard Bartholow, Ph. G. Cottonwood Falls, Kan.
 Himoe, Ernest, Ph. G. Kansas City, Mo.
 Hogeboom, Denton, Ph. G. Pittsburg, Kan.
 Kaiser, George Frederick, Ph. G. Ottawa, Kan.
 Morris, Edward William, Ph. G. Emporia, Kan.
 Parker, Robert, Ph. G. (Deceased.)
 Scott, John Nesbitt, Ph. G., M. D. 413 New Ridge building, Kansas City, Mo.
 Snapp, Loren Wade, Ph. G. Olathe, Kan.
 Webb, Alfred T., Ph. G. Topeka, Kan.

Class of 1890.

Boaz, Volney Tate, Ph. G. Girard, Kan.
 Claassen, John B., Ph. G. (Deceased.)
 Fiegenbaum, Benjamin F., Ph. G.
 Hackett, Leroy S., Ph. G., Humboldt, Neb.
 Kelley, Samuel J., Ph. G. Olathe, Kan.
 Phillips, Carl, Ph. G., Florence, Kan.
 Thomas, Arthur W., Ph. G., M. D. Wakefield, Kan.

Class of 1891.

Amos, Wilbur Stanton, Ph. G. Dodge City, Kan.
 Brown, William Pierson, Ph. G. Perry, Okl.
 Hedges, Florence Luella, Ph. G., ———.
 Kennerly, James Wilson, Ph. G. Pueblo, Colo.
 Kennedy, John H., Ph. G. Eudora, Kan.
 Muller, Peter, Ph. G. Okl.
 Oatman, Homer Clifton, Ph. G., M. D. Lawrence, Kan.
 Pollock, Robert, Ph. G. Portland, Ore.
 Pugh, William Patterson, Lawrence, Kan.
 White, Homer Albert, Ph. G. Eudora, Kan.

Class of 1892.

Allen, Maude Beatrice, ———.
 Combs, Robert, Ph. G. Ames, Iowa.
 Day, Harold, Ph. G. Lamar, Col.
 De Donder, Achille, Ph. G. St. Mary's, Kan.
 Diggs, Fred. Le Porte, Ph. G. Perry, Kan.
 Eicholtz, Alexander J., Ph. G., ———.
 McClung, Clarence Erwin, Ph. G., A. B. Lawrence, Kan.
 McCreight, Samuel Marlin, Ph. G., M. D. Oskaloosa, Kan.
 Priestly, Carrie. Lawrence, Kan.
 Rankin, Victor Alexander, Ph. G. Fruitvale, Cal.
 Rankin, Herbert John, Ph. G. La Junta, Colo.
 Youngberg, John Edwards, Ph. G. Ottawa, Kan.

Class of 1893.

Baker, DeForest, Ph. G. Junction City, Kan.
Bergman, Louis House. Lawrence, Kan.
Lieurance, Calvin Delbert, Ph. G. Cherryvale, Kan.
Norberg, George Benjamin, Ph. G., M. D. 224 Nelson building, Kansas City, Mo.
Rudiger, Alfred Poehler, Ph. G. Lawrence, Kan.
Seiler, Nelson Hughes, Ph. G. Lawrence, Kan.
Watt, Robert Eneas. Wazahacie, Tex.
Wallick, Ellsworth Frank. Pueblo, Colo.
Wilson, Walter Everett, Ph. G. Concordia, Kan.
Youngberg, Alfred, Ph. G. Ottawa, Kan.

Class of 1894.

Barber, Perry Bigelow, Ph. G. Lawrence, Kan.
Clark, William Marshall, Ph. G., ———.
Ernst, Henry, Ph. G., M. D. Irving, Kan.
Fox, Harry I., Ph. G. Atchison, Kan.
Haller, George Ervin, Ph. G. Burlingame, Kan.
Jenkins, Herbert Edward, Ph. G. Seneca, Kan.
Joslin, Charles Edward, Ph. G. Rossville, Kan.
Kelly, Thomas Henry, Ph. G. Kansas City, Mo.
Northrup, James Edgar, Ph. G. Manila, P. I.
Northrup, Austa Adele, Ph. G. Lawrence, Kan.
Oehler, Fred. C., Ph. G. St. Joseph, Mo.
Parker, Orin Herbert, Ph. G. Kansas City, Mo.
Reynolds, Carl D., ———.
Steinberger, Earl Ira, Ph. G. (Deceased.)
Strother, William Orange, Ph. G. Frankfort, Kan.
Voeltzel, Louis Charles Gilbert, Ph. G. Kansas City, Mo.
Woodward, Brinton Darlington, Ph. G. Lawrence, Kan.

Class of 1895.

Bailey, Thos., Ph. G. Galena, Kan.
Bowen, W. F., Ph. G. Topeka, Kan.
Clarke, A. B., Ph. G. Oskaloosa, Kan.
Cowman, E. E., Ph. G. St. Joseph, Mo.
Kelling, W. B., Ph. G. St. Joseph, Mo.
Schopflin, Ed. F., Ph. G. St. Joseph, Mo.
Stuart, R. E., Ph. G. Hutchinson, Kan.

Class of 1896.

Carter, Clarence Alvin. 623 Osage avenue, Kansas City, Mo.
Chapin, Mary C., ———.
Dryden, John Lakin, Ph. C. Buffalo, Kan.
Fuller, Herbert Morton, Ph. C., Seneca, Kan.
Gilmore, Mark Ernest, Ph. C. Chicago, Ill.
Hedges, Grace Lydia, Ph. C. Grinnell, Iowa.
Hogeboom, Henry B., Ph. C., ———.
Jacquemin, Wm. Richard, Ph. C. Port Arthur, Tex.
Lang, Wm. Henry, Ph. C., ———.
Lear, James Mason, Ph. C. Parsons, Kan.
Mason, Myron Robinson, Ph. C. Leavenworth, Kan.
McMahon, James E., Ph. C., ———.
Nagels, Leon, Ph. C., St. Mary's, Kan.
Palmer, Chas. Francis, Ph. C., Leon, Kan.
Roberts, Wm. Osman, Ph. C. Lawrence, Kan.
Sheffer, Samuel Montgomery, Ph. C. Minneapolis, Kan.

Wherrell, Orta, Ph. C. Kansas City, Kan.
Wohlfram, Eugene Peter, Ph. C. Leavenworth, Kan.
Woodward, Chester, Ph. C. Lawrence, Kan.

Class of 1897.

Bushby, DeWitt Coombs, Ph. C., Denver, Colo.
Callison, Robert Clyde, Ph. C., Topeka, Kan.
Carlile, Mary Lois, Ph. C., Leon, Kan.
Davies, Howell Emelyn, Ph. C., University of Chicago, Chicago, Ill.
Gray, Spurgeon Nathaniel, Ph. C., Lawrence, Kan.
Ingham, William Vance, Ph. C., Leocompton, Kan.
Kelley, David Clark, Ph. C., Winfield, Kan.
Kelly, Herma Tabietha, Ph. C., Burlington, Kan.
Lange, William, Ph. C., Coffeyville, Kan.
Mathias, John Thomas, Ph. C., Kansas City, Kan.
Maxwell, William Lothrop, Ph. C., Olathe, Kan.
McKee, Logan David, Ph. C., Hutchinson, Kan.
Meyer, August Albert, Ph. C., Alma, Kan.
Meyer, Edward William, Ph. C., Kansas City, Mo.
Norris, Guy Brunnaugh, Ph. C., Batavia, Ohio.
Ozias, Ernest Lawrence, Ph. C., Lawrence, Kan.
Palmer, Charles Mahin, Ph. C., South Enid, Okl.
Pope, Charles Stevens, Ph. C., Kansas City, Mo.
Ringer, William Henry, Ph. C., Kansas City, Mo.
Smith, Almeda Louise, Ph. C., Lawrence, Kan.
Spencer, Daniel Hooker, Ph. C., Lawrence, Kan.
Sprague, Frank Marion, Ph. C., Hiawatha, Kan.
Stauffer, Jesse Ebersole, Ph. C., Denver, Colo.
Stewart, John Solomon, Ph. C., Topeka, Kan.
Todd, Herbert Gregory, Ph. C., La Junta, Colo.
Young, Clarence Floyd, Ph. C., Topeka, Kan.

Class of 1898.

Clinger, Nelson Wesley, Ph. C., Lawrence, Kan.
Dillard, James Everett, Ph. C., Fort Scott, Kan.
Fisher, Dora Catharine, Ph. C., Leavenworth, Kan.
Kirkland, Don C., Ph. C., Thayer, Mo.
Kohl, Herman B., Ph. C., Kansas City, Mo.
McKinnie, Charles E., Ph. C., Beloit, Kan.
Means, Ash, Ph. C., Wichita, Kan.
Murray, Joseph Patrick, Ph. C., Lawrence, Kan.
Nixon, Willie Elmer, Ph. C., Girard, Kan.
Overlander, Charles Leonard, Ph. C., Leona, Kan.
Rankin, Claude W., Ph. C., Lawrence, Kan.
Smith, George Mike, Ph. C., Augusta, Kan.
Smith, Maurice R., Ph. C., Lawrence, Kan.
Spencer, Herbert, Ph. C., Kansas City, Mo.
Swayze, Jason Clarke, Ph. C., Lawrence, Kan.
Temple, Harry P., Ph. C., Tyro, Kan.

Newspapers and Periodicals for Reading Room.

DAILIES.

Emporia Daily Gazette.....	Emporia.
Evening Standard.....	Leavenworth.
Fort Scott Daily Monitor.....	Fort Scott.
Galena Evening Times.....	Galena.
Hutchinson News.....	Hutchinson.
Kansas City Gazette.....	Kansas City, Kan.
Kansas City Journal.....	Kansas City, Mo.
Kansas City Star.....	Kansas City, Mo.
Kansas City Times.....	Kansas City, Mo.
Lawrence Daily Journal.....	Lawrence.
Lawrence Daily World.....	Lawrence.
Newton Daily Republican.....	Newton.
Salina Daily Republican-Journal.....	Salina.
Topeka State Journal.....	Topeka.
Wichita Daily Beacon.....	Wichita.

WEEKLIES.

Abilene Democrat.....	Abilene.
Abilene Weekly Chronicle.....	Abilene.
Alma Enterprise.....	Alma.
American Manufacturer and Iron World.....	Pittsburg.
Anthony Republican.....	Anthony.
Athenæum (Prof. A. M. Wilcox).....	London, England.
Baxter Springs News.....	Baxter Springs.
Beloit Gazette.....	Beloit.
Blue Mound Sun.....	Blue Mound.
Burlington Courier.....	Burlington.
Burlington Independent.....	Burlington.
Caney Chronicle.....	Caney.
Cawker City Public Record.....	Cawker City.
Centralia Journal.....	Centralia.
Cherryvale News.....	Cherryvale.
Chetopa Advance.....	Chetopa.
Christian Herald.....	New York.
Christian Register.....	Boston, Mass.
Clark County Clipper.....	Ashland.
Colony Free Press.....	Colony.
Concordia Daylight.....	Concordia.
Concordia Empire.....	Concordia.
Concordia Kansan.....	Concordia.
Conservative.....	Neb. City, Neb.
Council Grove Republican.....	Council Grove.
Courier Guard.....	Council Grove.
Current Remark.....	Lyndon.
Democratic Messenger.....	Eureka.
Dickinson County News.....	Abilene.
El Dorado Republican.....	El Dorado.
Emporia Democrat.....	Emporia.
Eudora News.....	Eudora.

Eureka Union	Eureka.
Evangelical Visitor.....	Abilene.
Galena Republican.....	Galena.
Garnett Journal.....	Garnett.
Gaylord Herald.....	Gaylord.
Girard World	Girard.
Gove County Republican Gazette.....	Gove City.
Great Bend Register.....	Great Bend.
Holton Recorder.....	Holton.
Holton Tribune.....	Holton.
Howard Courant	Howard.
Industrialist.....	Manhattan.
Jewell County Republic.....	Mankato.
Junction City Tribune.....	Junction City.
Kansas Agitator	Garnett.
Kansas Agriculturalist.....	Wamego.
Kansas City Mail.....	Kansas City, Mo.
Kansas Democrat.....	Hiawatha.
Kansas Farmer.....	Topeka.
Kansas Patron.....	Olathe.
Kansas Populist.....	Independence.
Kansas Staats-Zeitung.....	Kansas City, Kan.
La Cygne Journal	La Cygne.
Lawrence Germania.....	Lawrence.
Lawrence Jeffersonian	Lawrence.
Linn County Republic.....	Mound City.
Long Island Leader.....	Long Island.
Marion Record.....	Marion.
Marion Times.....	Marion.
Marshall County News.....	Marysville.
McPherson Republican.....	McPherson.
Miami Republican.....	Paola.
Minneapolis Messenger.....	Minneapolis.
Minneapolis Review.....	Minneapolis.
Morris County News.....	Parkerville.
Neodesha Register.....	Neodesha.
Neosho County Journal	St. Paul.
Ness County News.....	Ness City.
Norton Champion	Norton.
Norton Courier	Norton.
Oketo Herald.....	Oketo.
Olathe Tribune.....	Olathe.
Onaga Herald.....	Onaga.
Ottawa Journal.....	Ottawa.
Ottawa Weekly Herald.....	Ottawa.
Ottawa Weekly Times.....	Ottawa.
Paola Times	Paola.
People's Voice.....	Wellington.
Phillipsburg Herald.....	Phillipsburg.
Pleasanton Observer	Pleasanton.
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Salina Weekly Union.....	Salina.
Seneca Courier Democrat.....	Seneca.
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Star and Kansan.....	Independence.
The Advocate and News.....	Topeka.
The Better Way.....	Minneapolis.
The Kansas Endeavorer.....	Newton.
The Torch of Liberty.....	Mound City.
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Union Signal.....	Chicago, Ill.
United Presbyterian.....	Pittsburg, Pa.
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Wamego Times.....	Wamego.
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Western Odd Fellow.....	Topeka.
Wichita Eagle.....	Wichita.
Williamsburg Star.....	Williamsburg.
Winfield Courier.....	Winfield.
Wyandotte Herald.....	Kansas City, Kan.

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Advocate of Peace.....	Boston, Mass.
Bulletin of the American Mathematical Society (Prof. E. Miller),	New York.
Canadian Engineer.....	Toronto and Montreal.
Compressed Air.....	New York.
Independent (Prof. E. H. S. Bailey).....	New York.
Johns Hopkins University Circulars.....	Baltimore, Md.
Kansas Churchman.....	Topeka.
Kansas Suffrage Reveille.....	Le Roy.
Merck's Bulletin.....	New York city.
Modern Machinery.....	Chicago, Ill.
Modern Mexico.....	St. Louis, Mo., and Mexico City, Mexico.
Meyer Bros.' Druggist.....	St. Louis, Mo.
New England Druggist.....	Boston, Mass.
Ohio Meteorological Bureau, Report of.....	Columbus, Ohio.
Omaha Druggist.....	Omaha, Neb.
Pharmaceutische Rundschau.....	New York city.
Public Ownership Review.....	Los Angeles, Cal.
Rocky Mountain Druggist.....	Denver, Colo.
School and Fireside.....	Hutchinson.
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Western Drug Record.....	Kansas City, Mo.
Western School Journal.....	Topeka.

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Erratum.

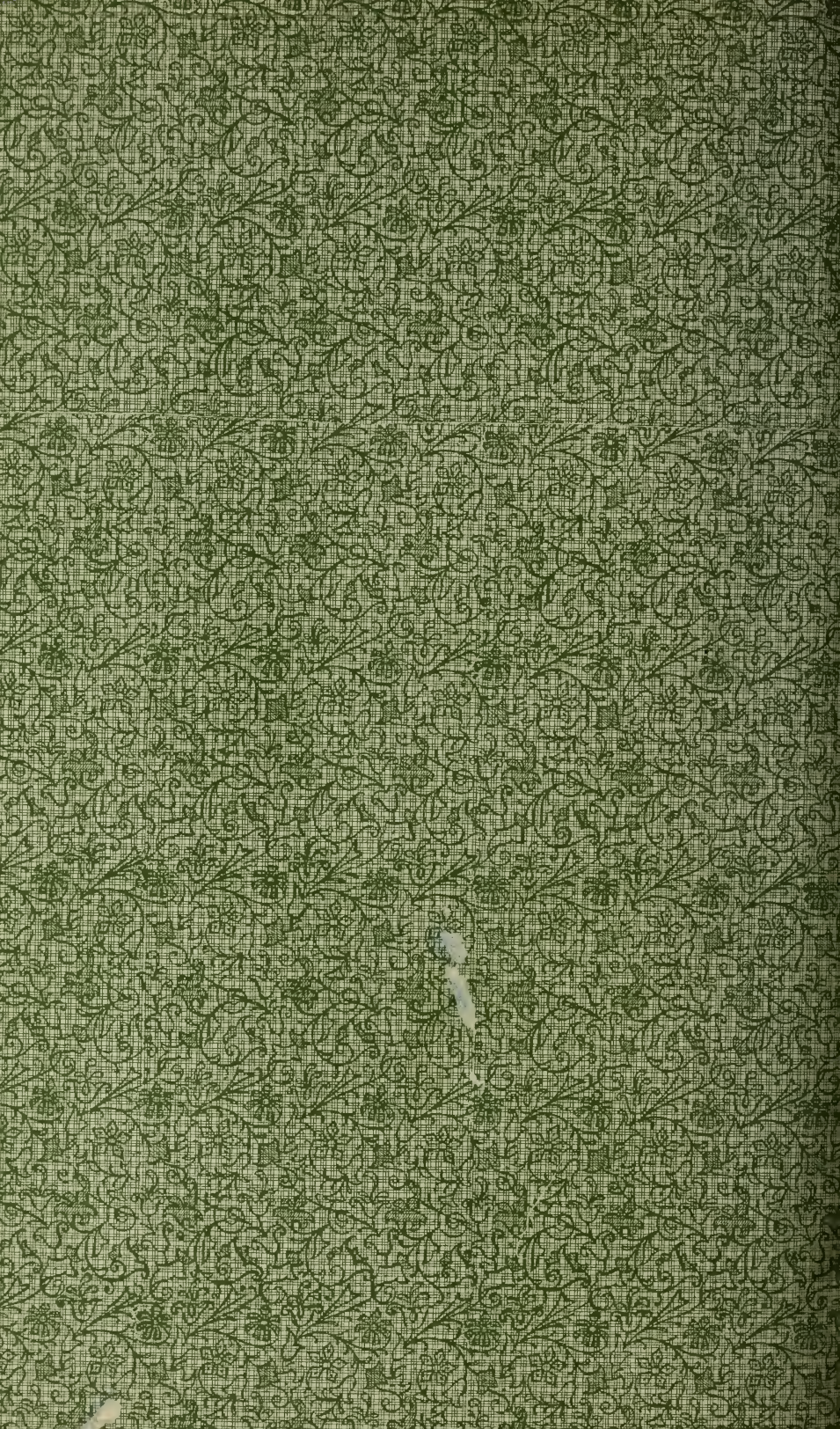
On page 139 it is stated that "tuition is free to Kansas students in every school of the University." An exception should be made of the School of Fine Arts, in which tuition fees are provided by law, and are named on page 77 of this catalogue.

Addenda.

To the list of accredited high schools, pages 29-31, should be added: Clifton—C. A. Strong, superintendent; Caroline McCracken, principal.

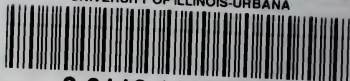
To the list of University of Kansas men in the Spanish war, pages 133, 134, should be added:

Clad Hamilton, First Lieutenant Company M, Twentieth Kansas.
Ernest F. Robinson, Surgeon Sixth U. S. Artillery, P. I.





UNIVERSITY OF ILLINOIS-URBANA



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